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ABSTRACT

Simulating Alternative Futures in Education (SAFE) is a simulation game dealing with the future of education from 1975 to 2024 and beyond. It is computerized on an APL direct-interaction system and can be played at any location over telephone lines. It takes approximately 1.8 hours of computer time to play, with 5 to 9 hours of preparation, and approximately 2 hours of discussion. SAFE "models" the short- and long-range impact on society of decisions which educational leaders might take about possible social, educational, and technological developments. Some of the objectives which the game is designed to help participants reach are: developing an increased sensitivity to the values of various socio-political groups; learning a wide range of future educational alternatives; and, integrating the future perspective into a personal philosophy of education. This paper includes the complete instructions for playing the game, a selected bibliography, and, in the Game Director's Manual, general directions for organizing participants and running the computer--including all the matrices of interrelationships utilized, plus complete computer programming. (Author/DAG)

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Project SAFE:

Simulating Alternative Futures in Education

by

Jerry Dean Debenham

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GAMES

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Games Computer Games Educational Games	12 College Students	Social Studies Students	Games Computer Assisted Instruction	Games Problem Solving Simulation Decision Making	Questionnaires Scoring

abstract

(Abstracts are either written by the developers, or are based upon descriptive information provided with the curriculum materials.)

SAFE is a simulation game dealing with the future of education from 1975 to 2024 and beyond. It is computerized on an APL direct-interaction system and can be easily played at any location over telephone lines. It takes approximately 1.8 hours computer time to play, with 5 to 9 hours preparation, and approximately 2 hours discussion. Team sizes may vary from 2 to 18, but smaller groups are more manageable. Up to 70 students can play the game at a given time. Specifically, SAFE "models" the short- and long-range impact on society of decisions which educational leaders might make about possible social, educational, and technological developments. It does not attempt to predict real educational developments of the future or their impact on society, but undertakes only to open the imagination to possibilities. Some of the objectives which the game is designed to help participants reach are: developing an increased sensitivity to the values of various socio-political groups; learning a wide range of future educational alternatives; and, integrating the future perspective into a personal philosophy of education. There are complete instructions for playing the game, a selected bibliography, and, in the Game Director's Manual, general directions for organizing participants and running the computer--including all the matrices of interrelationships utilized, plus complete computer programming.

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Project SAFE: Simulation-Game Manual	142 pages	00033-02
Project SAFE: Game-Director's Manual	97 pages	00033-03

For other instructional units from this same project, see:

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ITEM # 01

SIMULATING ALTERNATIVE FUTURES IN AMERICAN EDUCATION

by Jerry Debenham
University of Utah, Department of Educational Administration
May 1973

Imagine yourself in this situation. The year is 2005. You're a public school district administrator. You have just implemented a program which makes advanced intelligence drugs available to all citizens in the community. An unanticipated minority has become rebellious as advanced reasoning and memory powers qualify numerous citizens for professional training and jobs which the society cannot provide. Lawsuits are initiated by conservative groups demanding the discontinuation of usage of the drugs. The teacher's union has decided to strike if intellignece drugs aren't prohibited in the schools. Radicals threaten a revolution if their free distribution is discontinued. The federal government promises to back you if you maintain the program.

This is just one among an infinite number of possible scenarios which can occur in the completely computerized classroom game called SAFE (an acronym for Simulating Alternative Futures in Education). The game is the product of several year's effort at synthesizing the growing body of futurist literature in education into a meaningful learning experience for students of social change. It has been recently used in courses in Education, Educational Administration, Sociology, and Social Work at the University of Utah.

Specifically, SAFE is designed as a game which models the short and long-range impact on society of decisions which educational leaders might make with respect to possible social, educational and technological developments from 1975 to 2024 A.D. The game DOES NOT ATTEMPT TO PREDICT REAL EDUCATIONAL DEVELOPMENTS OF THE FUTURE OR THEIR IMPACT ON SOCIETY, but undertakes only to open the imagination to possibilities. The game is designed to hlep participants reach the following objectives:

* Participants will learn a wide range of future educational alternatives which can be anticiapted to some extent from generally foreseeable developments in American society.
* Participants will learn new techniques and approaches now emerging to facilitate meaningful long-range planning.
* Participants will learn a model for studying the interrelationships between schools and society and the consequent restraints on the powers of educational decision makers.
* Participants will develop an increased sensitivity to the values of various socio-political groups.
* Participants will deliberately examine a variety of viewpoints on controversial issues about the future with the intention of establishing informed opinions about them.
* Participants will demonstrate faith in the power of reason and in analytical methods to foresee and build a more viable future.
* Participants will weigh alternative educational policies against the standards of long-range overall public welfare rather than short-term or special interest groups.
* Participants will judge problems and issues in terms of situations, purposes and consequences involved rather than

in terms of fixed, dogmatic precepts or emotionally wishful thinking.

* Participants will seek to integrate the future perspective into their personal philosophy of education.
* Participants will show increased confidence in their own and their society's ability to deal with a rapidly changing world.

SAFE employs a complex model of the interrelationships between schools and society which is purely hypothetical. General social indicators, which are a precondition for an accurate systems model, are just beginning to be condeptualized and gathered. What this exercise underscores is the need for systemmatic thinking in terms of a variety of alternatives, for considering long-range multifold effects of educational decisions and for gathering extensive, reliable social statistics of relevance to educators.

GAME PROCEDURE:

In its mechanics, SAFE cneters upon the interplay of five basic elements:

District Innovation Planning Committees develop operating and planning programs within the constraints of a designated operating budget. Their objectives is to maximize overall social satisfaction with public education.

Edvents are general proposals for changes in the educational system. Two new edvents occur during each two-year planning period and their adoption by the district affects the socievents and the indices of satisfaction.

Socievents are general classes of social developments (such as GNP growth, student riots, teacher strikes) which occur on a probability basis and are affected by the various edvents and in turn, affect the indices of satisfaction.

Educational Evaluators are socio-political groups representing alternative viewpoints concerning the best aims and methods of education. They determine the impact of district innovation planning committee decisions upon the indices of satisfaction.

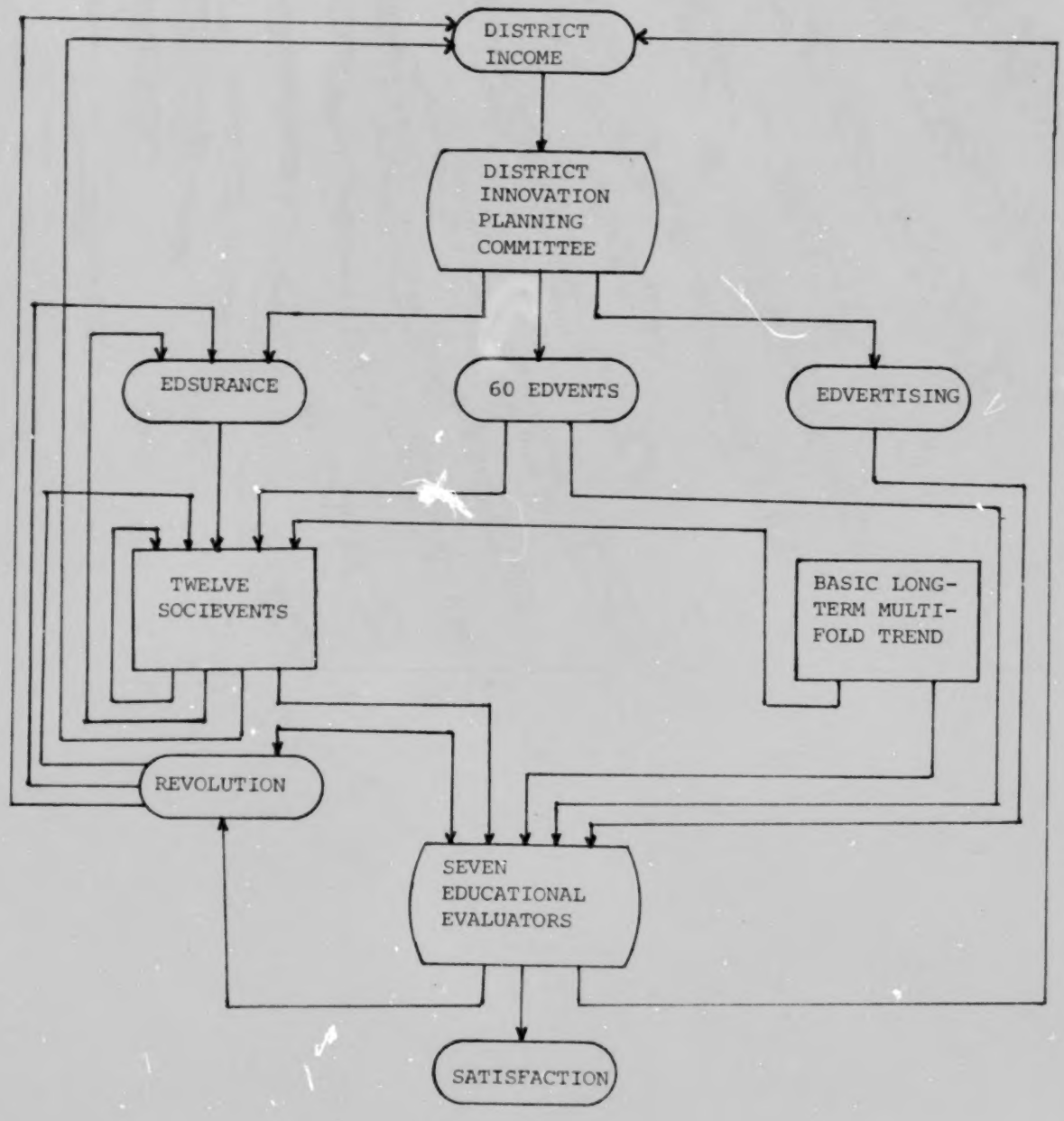
Indices of Satisfaction are social indicators of the degree of relative change in satisfaction with public education by each of the seven educational evaluators.

Each participant in the game represents an important community leader and is part of an innovation planning committee for a metropolitan school district. He is responsible to help the committee make crucial decisions for the district over the next fifty years or from 1975 to 2024. There are one to three other districts in the state called STATOS. The committee task is to please the public over the long-run more adequately and consistently than any of the other districts. If it can do this, it can win more satisfaction points than any of the other districts by the year 2024 and will be declared the winner.

The committee has three ways to affect its world, a role played by the computer: 1) through edvents, 2) edsurance, and 3) edvertising. Figure I is a flowchart showing these alternatives. The main way is

through the purchase of edvents. These are sixty major proposals for educational reform in STATOS. Table III briefly describes the first twenty of them. Only eight to twelve of these edvents are available as options from which the committee may choose at any given time. The committee task is to select that edvent among the options which will win it the most satisfaction points for the present, have the least undesirable long-range consequences, and is least expensive after dividing the benefits by the costs.

FIGURE I
FLOWCHART OF INTERACTIONS BETWEEN THE DISTRICT INNOVATION PLANNING COMMITTEE AND THE WORLD



In each district is hypothesized that there are seven distinct socio-political groups actively concerned about influencing the course of education. Table I briefly describes these educational evaluators and gives the influence they wield over the public at the beginning of the game. Every edvent has some evaluators who favor it and others who oppose it.

The number of points a committee may win by the implementation of an edvent is determined by summing the products of the influence levels and the degree to which each evaluator favors or opposes the edvent. For example, if the Essentialists control 32% of the

TABLE I
BRIEF DESCRIPTION OF THE EDUCATIONAL EVALUATORS

1. Neo-perennialists: This group believes in a fundamentally unchanging universe. Schools are responsible to teach the essentials of the protestant ethic. The trend toward the expansion of school responsibilities is to be reversed. Influence level: 8%.

2. Essentialists: This group believes in a slowly evolving world. Educators are to transmit only those cultural elements that have become thoroughly established (support the status quo) and integrated into the national heritage. Influence level: 32%.

3. Social Realists: This group believes it is the job of the school to keep up with social change and adjust to the needs of society. It believes in moderate expansion of the schools and opposes any programs which might weaken the influence of educators. Influence level: 25%.

4. Experimentalists: This group believes the purpose of education is the development of critically minded individuals capable of seeking and finding creative answers to the problems they face in society. It favors considerable student freedom. Influence level: 12%.

5. Social Reconstructionists: This group believes the purpose of education is to develop individuals with the ability and desire to create a better social order along the lines dictated by current social knowledge. Influence level: 12%.

6. Human Potentialists: This group believes the purpose of education is the expansion of consciousness and the provision of experiences which promote individual self-actualization. It promotes almost unlimited student freedom. Influence level: 10%.

7. Biological Reconstructionists: This group believes the ultimate purpose of education is the promotion of the biological transformation of man. It promotes all programs which help man control or transform his primitive instincts. Influence level: 2%.

power and are rated moderately in favor of an edvent, then tyey offer the district 320 satisfaction points (320x1, where 1 stands for a moderate rating) if it is implemented. If the other evaluators, however, are against the edvent, all total the district may still lose points.

Unfortunately, not all edvents are successes. The success or non-success of an edvent is dependent upon the extent to which teachers, students, parents and administrators will go along with it. When an edvent fails, the influence changes anticipated with its success are reversed, and only half the satisfaction points possible are earned.

There are also many citizens in STATOS who are threatened by most changes which occur in education and generally speaking, are most pleased when no change takes place and taxes are reduced. The decision they like best about change, with a few exceptions, is the decision to avoid all change. This is called the Null Option in SAFE. Though it costs nothing to implement, it has far-ranging effects upon the influence levels of the evaluators and the probability of occurrence of the socievents.

There are twelve major social events of importance to educators which migh occur. These are briefly described in Table II. During every two-year period the computer generates a random number between one and one thousand. If this number is greater than the probability of occurrence for a socievent, the socievent does not occur. If it is equal to or less, it does occur. The occurrence of a socievent, like the implementation of an edvent, also has multiple far-ranging effects. First, its occurrence may increase or decrease the probability of itself in the future and each of the other socievents. Second, it may change the influence levels of the educational evaluators. And third, it may radically affect the income of the district.

Participants don't need to stand idly by and watch the computer generate disasters. A second way the committee may affect its world is by the purchase of edsurance. Edsurance consists of a series of programs which may range from community-school interaction groups to the establishment of emergency funds. Its purchase assumes that the implementation of such programs reduces the probability of occurrence of negative socievents by two-thirds. Edsurance does not, however, reduce the probability of occurrence of nuclear war or revolution!

The only way the district can modestly reduce the probability of nuclear disaster is by strenuous implementation of certain select edvents and the avoidance of others.

Revolution may occur in the district if the influence of two or more socio-political groups has dropped below zero. This means that district leaders have been ignoring the needs and interests of this segment of society and it now constitutes a powerless, alienated, disgruntled minority. If a revolution occurs (stochastically determined), it may success or fail. But in either case, like edvents and socievents, it has far-ranging effects upon the society.

TABLE II
BRIEF DESCRIPTION OF THE TWELVE SOCIEVENTS

Socievent	Description	Cost
1.	National GNP growth results in a tax increase	SD +2.225 M.
2.	Greater efficiency in school administration	SD +2.625 M.
3.	Increase in community involvement and concern	SD +8.625 M.
4.	Greater national interest and funding	SD +6.750 M.
5.	Conservative reaction by politicians	SD -4.250 M.
6.	Parent boycotts and suits over changes in sch.	SD -3.500 M.
7.	Teacher strikes and sabotoge	SD -4.500 M.
8.	Student riots, protests and vandalism	SD -4.250 M.
9.	Sudden increase in student population	SD -3.500 M.
10.	Accidental school disasters	SD -5.000 M.
11.	Redirection of resources from schools	SD -6.250 M.
12.	Limited nuclear or other social disaster	SD -125.000 M.

The problem that quickly comes to participant awareness is that many edvents which may win the most immediate public satisfaction often raise the probability of occurrence of undesirable socievents. In view of this, the committee may 1) go ahead with the original choice and take its chances, 2) choose one with less points but more desirable long-range effects, or 3) take this second option, but then follow it -with edvertising.

Edvertising is the third way the committee may affect its world. It consists of a series of techniques ranging from media presentation to lobbying and catering to influential people -- all in an effort to persuade the evaluators that they should like the committee's choice much more than they seem to be inclined to like it. For example, if in 1975 Career Education is the best point-winner but Family Neighborhood Learning Centers has the best long-range effects, the district may choose the latter and through edvertising raise its satisfaction winning potential to the level of Career Education. Unfortunately, however, district funds are limited and edvertising is expensive.

In addition to all the forces for change outlined above, there is one final powerful force affecting the socievent probabilities and influence levels. It is the basic, long-term trend of the society to become increasingly sensate (empirical, humanistic, utilitarian or hedonistic) and egalitarian (meritocratic, democratic, and socialistic). In SAFE, this trend is expressed in terms of a gradual strengthening of the four liberal influence groups and certain socievents.

In summary, the district innovation planning committee has three ways of changing its world: through edvent selection, edvertising and edsurance. The computer has three ways of affecting the district: through socievents, revolution, and the basic, long-term multifold trend. By these means the computer can radically reduce the district income and change the influence levels of the evaluators. The players soon realize that the computer plays a very powerful role and the committee a weak one. Participants never have quite enough money and the computer is always creating some ominous situation. The committee

task is to anticipate the long-range consequences of its decisions in such a way that it can generally control the computer, maximize its points and outwit the other teams.

PREPARATION AND PLANNING:

Because of the complexity of the game as a result of the slow, but constant changes in all relationships, the game is divided into five ten-year planning period. When participants come to interact with the computer, it takes them only ten years into the future. Then it automatically summarizes everything that has happened -- all the points the district has earned, socievents which occurred, the debts accumulated, interest charged, changes in influence levels and probabilities of occurrence for socievents, etc., and turns itself off. This information is then used to prepare policies and make decisions for the next ten-year period.

Participants are taught during the course of the game to mathematically optimize their decisions by the use of three types of analysis: public relations, futurist, and cost-benefit. At the beginning of the game, players are asked to review the first twenty edvents and select by intuition those which they feel will earn them the most points. The result is that they select the ones they personally like the most. This is also the approach many district leaders use today. In the game, however, it usually proves to be a disaster. Unlike the real world, the computer immediately analyzes every decision the participants make in terms of the three forms of analysis mentioned above.

For example, in 1975 the edvent options are one through twelve. The computer performs a public relations analysis by calculating the number of points each of these edvents could earn the district and then asks itself if the district choice is one of the best two. If it is, it types out: YOU MADE ONE OF THE BEST POSSIBLE CHOICES FOR EARNING PUBLIC SATISFACTION. If the district choice is not one of the best two, the computer types: YOU DID NOT MAKE ONE OF THE BEST CHOICES FOR EARNING PUBLIC SATISFACTION. ANALYSIS RANKS IT X, where X stands for the position the choice held in the ranking.

The computer then proceeds to perform a futurist analysis by evaluating and ranking the long-range consequences of each edvent. Finally, it performs a cost-benefit analysis by summing the benefits, both short and long-range, and dividing them by their costs. In each case, participants get immediate feedback on their decisions as shown above.

Our experience shows that students find this kind of feedback quite discouraging at the beginning of the game. It disturbs their faith in their intuitions and hence, their ability to make reasonable decisions. At the end of the first round, they often sit discouraged by the results of their decisions, and yet fascinated by the computer's ability to instantaneously evaluate all their choices. The result is

that most become determined to master more complex and analytical techniques of decision making in order to control the computer.

The game is designed to help the participants accomplish precisely this goal. Over the next four rounds, the assignments are gradually increased in difficulty until by the end of the game, students can mathematically handle all three forms of analysis and generally speaking, consistently receive the highest praise from the computer for their superior decisions. Students seem to find this electrifying and very encouraging.

RESULTS:

We have now played the simulation-game with a number of groups at the University of Utah in Education, Educational Administration, Sociology and Social Work. Our evaluations indicate that all the objectives are met with over 90% of the participants. When we ask students what they feel are the most important things they learned from the game, the following three are most frequently stated: 1) "getting educational ideas for the future," 2) "learning different things the districts have to take into consideration before implementing a new program," and 3) "seeing how the future can be affected by the manipulation of power groups." When we ask what aspects of the game they enjoyed the most, two responses dominate: 1) "running the computer and watching the results," and 2) "working with other members of the group and seeing how their opinions compare with mine."

APPLICATION:

SAFE was originally designed to be played manually. The inherent complexities and mathematics of the game soon ruled this out. The game is now completely computerized on an APL direct-interaction system. Participants may sit down at a portable computer terminal anywhere in the nation and connect by telephone with the nearest computer facilities. The students run the terminal themselves. And although the game takes into consideration over 1400 variables, it is still quite manageable by undergraduater of all abilities.

The game takes apporximately fifteen hours to play. This includes 2.3 hours computer connect time, 5 to 8 hours individual preparations, 3 hours in small group discussions, and one or more hours in large group discussions both before and after the game.

The number of people which may play the game at a given time is essentially unlimited. However, only ten teams can play on one terminal and one account. Successful team sizes vary from 1 to 18, though smaller groups are more manageable. Average costs have been $3.00 for the 125 page game manual and from 50¢ to $4.00 per student for computer time (depending upon the size of the group and location of the computer center.).

TABLE III
SUMMARY OF THE FIRST TWENTY EDVENTS

Edvent	Description	Cost
1.	Career Education: Proposes that educational institutions become much more career oriented through the establishment of Career Education Centers and Greater Community Talent Banks.	SD 11 M.
2.	Vouchers: Proposes that public schools be redesigned to provide alternative learning environments which are financed by the number of students they can attract and keep.	SD 12.5 M.
3.	Accountability: Proposes that districts be responsible for defining specific goals and behavioral objectives and that profiles of general effectiveness be made public.	SD 7.5 M.
4.	Authoritarian Schools: Proposes that teachers and principals be given authority to impose considerably more discipline through mild corporal and severe social punishments.	SD 3.5 M.
5.	Family Neighborhood Learning Centers: Proposes that centers be publicly financed where both children and adults can be enticed into new educational experiences.	SD 16.5 M.
6.	Community Nursery Centers: Proposes that centers be publicly financed which both train parents in child-rearing and care for and educate the children of working mothers.	SD 14.5 M.
7.	Televised Home Study: Proposes that distinguished scholars prepare televised study units and that students throughout the nation may receive credit in lieu of traditional classes.	SD 11 M.
8.	Education as Vocational Training: Proposes that educators limit their compulsory requirements to direct vocational training under the guidance of a national testing agency.	SD 6.5 M.
9.	Community Guidance and Evaluation C enters: Proposes that school counselors and psychologists be re-oriented to cater to the needs of the entire community.	SD 17 M.
10.	Experiential Learning Schools: Proposes that educators shift emphasis from cognitive to confluent or experiential learning with careful emphasis on training the emotions.	SD 8 M.

First twenty edvents continued

11. Interactional CATV Schools: Proposes that two-way televised communication be established between the home, the school and the community.	SD 11
12. Individualized Learning Schools: Proposes that instruction be automated where possible, teachers re-oriented and upgraded, and schools opened the year round.	SD 8.5 M.
13. Education as an Occupation: Proposes that the required years of schooling be increased, but that students receive significant incomes as they advance into higher learning.	SD 18 M.
14. Society Schooling: Proposes that large schools be broken into small clusters which form miniature societys of their own and which are controlled and directed by the students themselves.	SD 9.5 M.
15. Community Arts Center: Proposes that art education be vastly broadened in concept and be made available to the whole community through public supported centers.	SD 14.5 M.
16. Family Health Center: Proposes that health education be vastly broadened in concept and made available to the whole community through public supported centers.	SD 13.5 M.
17. Educational Research Institute: Proposes that regional centers be established for developing and testing alternatives to and improvements in the public schools.	SD 5 M.
18. Student Information Service: Proposes that personality projectiles be made on every student to detect in advance important negative deviances from the norm.	SD 6.5 M.
19. Youth Towns: Proposes that educational parks be built in slum areas which are organized as total youth communities with their own government, shops and student housing.	SD 17 M.
20. Education Assembly: Proposes that boards of education be reformed on regional levels to function in a similar manner as state legislatures. Memare elected by quota.	SD 6 M.

ITEM # 02

SAFE: SIMULATION-GAME MANUAL

A Computerized
Simulation-Game of Alternative Futures
for American Education from 1975 through
2024 A.D.

by

Jerry D. Debenham

University of Utah

Cultural Foundations of Education

June 1973

FOREWARD

SAFE is a game about the future. It is also a simulation which suggests complex interrelationships between schools and society, new techniques and rationale for meaningful decision-making, and many social and educational developments which might occur over the next 50 years.

SAFE, an acronym for "Simulating Alternative Futures in Education," attempts to synthesize parts of the growing body of futurist literature in education into a meaningful learning experience. Specifically, *SAFE* is a hypothetical study of the impact of possible educational developments in the last quarter of the Twentieth Century and first quarter of the Twenty-first upon the quality of life in a highly industrialized, democratic country. Most of the background information for this simulation has been taken from delphis forecasting and scenarios describing educational trends and possible developments in the United States; but with minor modifications, *SAFE* is adaptable to any country with a public education system.

This document serves as the game-manual for participants in the computerized version of the simulation. It

contains complete instructions and materials for playing the game, a sample run, a select bibliography, and a game evaluation form. Each participant will need a copy of this manual. In addition, the game director will need *"SAFE:* Game Director's Manual," which contains complete instructions for organizing the game, running the computer, and changing initial values, edvents,* and/or socievent* interrelationships.

The development of this simulation and its documentation were initiated under a research fellowship from the University of Utah. Its completion serves as the basis of a dissertation by the author in Cultural Foundations of Education.

The author wishes to express his appreciation to members of his committee and especially to his chairman, Michael J. Parsons, for his patience, assistance, and encouragement throughout the entirety of this project. Special appreciation is also extended to Jerry W. Smith and Ted C. Smith for numerous and significant contributions to this study. Considerable influence in the game's development resulted from many student suggestions and three other simulations relating to the future of society: "STAPOL," by Dennis L. Little, et al. (Middletown, Conn.: Institute for the Future, 1971), "DELPHI," by Stuart

*These terms are explained in the manual.

Umpleby and John Briggs (University of Illinois, 1970), and "FUTURE," by Kaiser Aluminum Corporation, 1966.

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INTRODUCTION

SAFE is a simulation of the impact of public educational decisions upon the quality of life within a state designated as STATOS. Specifically, it is designed as a game which models the short- and long-range impact on society of decisions which educational leaders might make with respect to possible social, educational, and technological developments from 1975 to 2024 A.D. The game attempts to predict neither real educational developments of the future nor their impact on society, but undertakes only to open the imagination to possibilities.

SAFE is designed for use as an educational or training exercise for any individuals with serious interest in a dynamic, industrialized society. The game is designed to help participants reach a number of objectives. Some of them are:

* the need to think in terms of a past-present-future continuum and the interrelatedness of short- and long-term developments
* the fact that there may be many alternative educational futures
* the fact that the future differs from the present as a result of both human decisions and chance natural happenings
* the importance of analyzing and attempting to control events exogenous to the educational policy process

* the fact that educational programs may have different impacts upon different societal sectors
* the fact that there are competing priorities for limited resources
* the need to develop decision-making skills in an environment which involves uncertainty (external events) and restraints (budget)
* the potential usefulness of social indicators and educational indices of satisfaction
* the need for a model of the interrelationship between schools and society capable of prediction
* the potential usefulness of computers in educational decision-making

SAFE presupposes a simplified systems model of the decision process and of interrelationships between schools and society which only tangentially simulates aspects of the real world. General social indicators and studies of systems dynamics of relevance to educators are in the infancy stages. What this exercise underscores is the need for systematic thinking in terms of a variety of alternatives for considering long-range, multifold effects of educational decisions, and for gathering extensive, reliable social statistics of relevance to educators so that truly sophisticated models can be designed and used.

In its mechanics, *SAFE* centers upon the interplay of five basic elements:

> District Innovation Planning Committees develop operating and planning programs within the constraints of a designated operating budget. Their objective is to maximize overall social satisfaction with public education.

Edvents are general proposals for changes in the educational system. Two new events occur every two years in the game and their implementation by the districts affects the socievents and the educational evaluators.

Socievents are general social developments (such as GNP growth, student riots, nuclear war) which occur on a probability basis. Their occurrence affects the district income and the educational evaluators.

Educational Evaluators are sociopolitical groups which represent different societal sectors and alternative viewpoints concerning the best aims and methods of education (a role played by the computer). They determine the impact of district innovation planning committee decisions upon the indices of satisfaction.

Indices of Satisfaction are social indicators of the degree of relative change in public satisfaction with education. They determine how many points the district wins.

Players are randomly assigned to groups of three to 20 to represent District Innovation Planning Committees. Over a span of five ten-year planning periods, the committees choose among 60 edvents those innovations for the schools which they feel will maximize the satisfaction of the educational evaluators as measured by the indices of satisfaction, and which will most likely reduce the probability of occurrence of undesirable socievents. The team which accumulates the most satisfaction points over the 50-year planning period is the winner. Each of these aspects of the game will be described in more detail later in this manual.

This simulation-game has been designed to be played on an APL direct-interaction computer terminal

with one or more teams of human role-players. All edvents, socievents, and educational evaluators as well as their interrelationships and their ultimate impact upon the indices of satisfaction are represented and totaled by the computer in order to simplify and shorten the time needed for play. Manually operated versions of the game have been designed, but they have not been used widely because of the extensive time required to calculate the effects of the hundreds of interrelationships.

Section I

THE DISTRICT INNOVATION PLANNING COMMITTEES

In the simulation-game *SAFE*, each participant plays the role of an important community leader who is a member of an Innovation Planning Committee for a large metropolitan school district. You are one of these leaders and will help your committee make the crucial policy decisions for the district over the next 50 years, or until the end of your life. There are one to nine other major districts in your state, called STATOS. You are competing with them against the computer. It represents the world. Your task is to please your constituency over the long run more adequately and consistently than any of the other districts. If you do this, you can win more satisfaction points than any of the others by the year 2024, and will be declared the winner.

You have three ways to affect your world (i.e., the computer) as shown in Figure 1 on the following page. The main way is through the purchase of edvents. These are major proposals for educational reform in STATOS.

There are 60 edvents which are proposed over the 50 years. They are all listed in Appendix A at the end of this manual. For example, the first one is Career

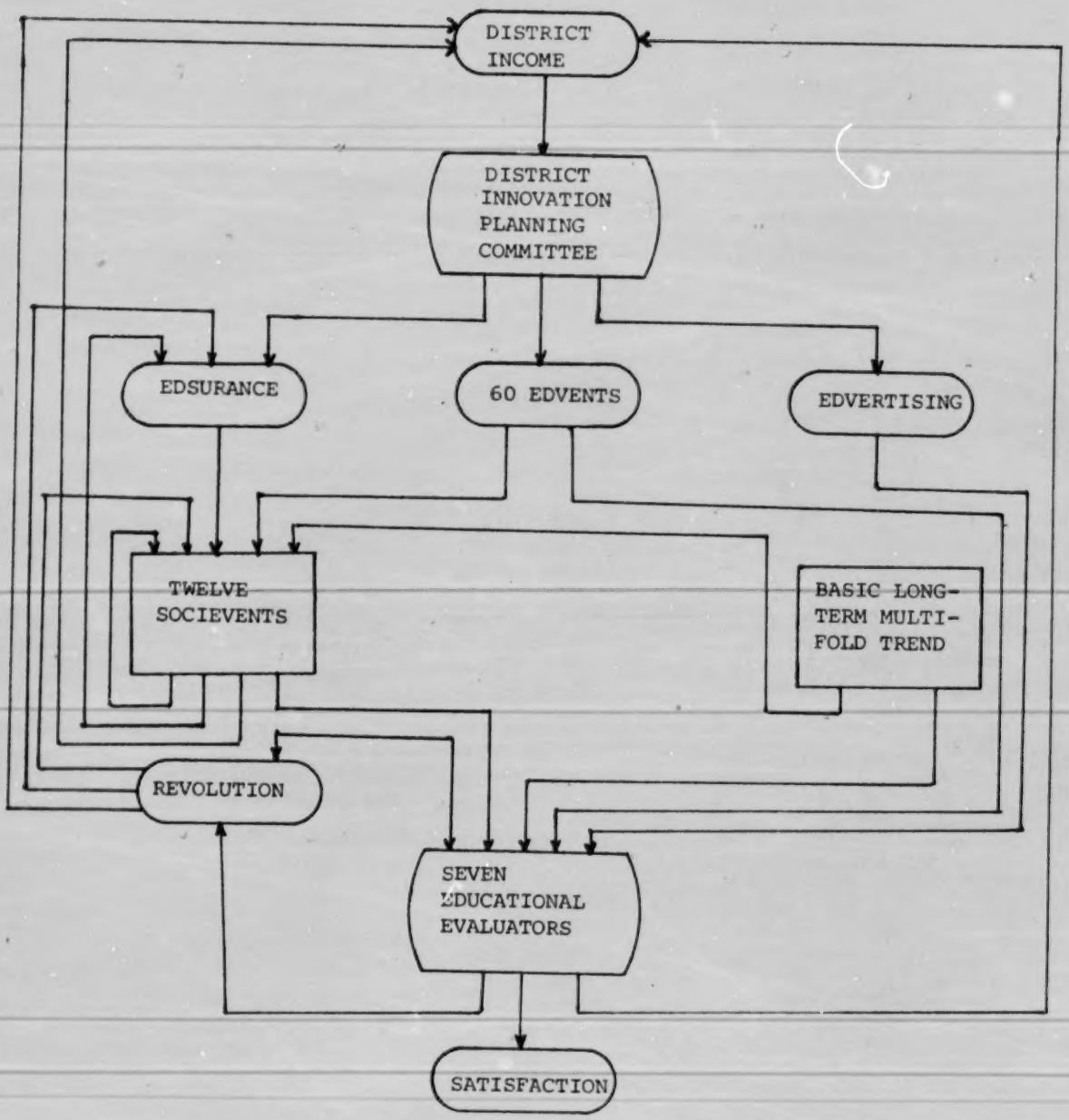


Fig. 1.--Flowchart of interactions between the district innovation planning committee and the world.

Education. It proposes that the public schools become much more occupation-oriented. Some of the power groups in your community like this proposal, others loathe it. If those who like it have more influence than those who dislike it, you can win satisfaction points. The more the like it, the more points you can win. Your task is to help the committee decide which of the edvents that are proposed will win you the most points. Unfortunately, you do not have enough money to buy very many edvents, so you must be quite selective.

While you are busy making your selections, the computer, which represents the world, is busy creating all kinds of problems for you to deal with. These problems are called socievents. There are 12 of them and they represent major socia. developments which might occur during any given year. For example, you might experience student riots which will cost your district $D 4,500,000 (STATOSDOLLARS) or one-third of its biennial innovation budget. It is possible to have a revolution or even nuclear war, from which it is very difficult to ever get out of debt.

Your committee does not need to sit back passively and just watch these disasters occur. You can do two things to help prevent their occurrence:

One, you can buy edsurance. When you purchase edsurance, we mean that you hold special seminars, bribe

students or faculty, infiltrate dissident groups, lobby at the legislature, or actually buy insurance policies designed to specifically keep undesirable social events from occurring or at least affecting you.

The other way to keep the computer from ruining your plans is to select only those edvents which lower the probability of occurrence of undesirable social events. Edvents not only can win or lose you points, but they can also affect the occurrence or nonoccurrence of socievents. For example, if you buy edvent two, Vouchers, it may win you 500 satisfaction points, but it will make it much more likely that the computer is going to tell you that you had teacher strikes and hence lose $D4,500,000. What do you do when your best choice for satisfying the power groups might significantly raise the probability of a disaster occurring?

There is a way out of this dilemma. You can buy edvertising. By this we mean that you design special media presentations for the mass public, treat influential people to special luncheons or conferences in remote scenic lands, invite in reporters when anything noteworthy is happening, hire public relations consultants, carefully cover up anything that goes wrong, and design special studies to prove your assertions--all in an effort to persuade your constituency that it should like your decisions much more than it seems to be presently inclined to

like them. For example, say the best choice for earning public satisfaction points among the edvent options is Career Education, but you discover that its implementation will make nuclear war more likely. And if nuclear war occurs, you are ruined. Yet you want to win as many points as possible. What you decide to do is to purchase the second best choice, which does not make nuclear war more likely. In order to make up for the lost points, you decide to persuade the public that it likes this second choice as much as it was going to like the first choice. This way you can earn just as many points or even more than were possible with the first choice. Of course, it does cost you considerably more money. But you reason that in the long run, by choosing not to raise the chance of nuclear war, you are ahead.

So altogether you have three ways of changing your world: through edvent selection, through edvertising, and through edsurance. The computer has three ways of affecting you--through the occurrence of socievents, revolution, and the basic, long-term trend. But in comparison, its power can be very strong and yours quite weak. You never will have quite enough money and it will always be generating some expensive disaster. Your task is to anticipate its machinations and therefore reduce their probability of success. Only this way can you control the

computer. But at the same time, you must not forget to also outwit the other districts by earning more satisfaction points.

In order for you to have some time to think about and plan your actions, the game is divided into five ten-year planning periods. When you interact with the computer, it will take you only ten years into the future during one session. Then it will automatically summarize everything that has happened--all the points your district earned, all the disasters that occurred, all the debts accumulated--and turn itself off.

To help you prepare for the first and each of the succeeding rounds, the game director will give you short homework assignments designed to help you become familiar with the major variables in the game, and most importantly, help you determine what are the wisest decisions to make during the next ten-year period. The next time you meet with your committee and before you interact with the computer, you will present your recommendations to the team. The committee task is to reach a consensus on what decisions it should make during the following ten years.

In summary, you are an important community leader on an Innovation Planning Committee which represents a typical large metropolitan school district over the years 1975 through 2024 A.D. It is assumed that the programs

your planning committee develops for educational change in the district are adopted and implemented by the Board of Education. All your decisions are planned on a ten-year basis but implemented in two-year intervals. So all together there are five rounds to the game and 25 implementation periods. Your committee task is to accumulate as many satisfaction points as possible. You have three powerful means to accomplish this: selection of edvents, edsurance, and edvertising. The team which most successfully outwits the computer and each of the other teams by the end of the game is the winner.

In each of the following sections, the various elements of the game mentioned here will be discussed in greater detail. The final section describes the specific responses of the computer itself.

Good luck! and Good planning!

Section II

EDUCATIONAL EVALUATORS

District innovation planning committees purchase edvents which automatically determine the satisfaction felt by various sociopolitical segments of society. There are in STATOS numerous and conflicting points of view on the goals of education. In *SAFE* we therefore hypothesize the existence of numerous sociopolitical groups concerned with influencing top educational decisions. They do not represent all the citizens in the district, but only that powerful minority consisting of bankers, newsmen, real estate interests, religious leaders, businessmen, politicians, and assorted vocal special interest groups. They are identified with the following seven value orientations:

* Neoperennialism (NEO)
* Essentialism (ESS)
* Social Realism (SOC)
* Experimentalism (EXP)
* Social Reconstructionism (REC)
* Human Potentialism (HUM)
* Biological Reconstructionism (BIO)

A brief description of each value orientation and the percentage of influence its adherents, who are called the educational evaluators, wield at the beginning of the game over educational policy decisions in the community follows:

* Neoperennialism (NEO) Influence level: 8%

This value orientation is represented primarily by medium-educated, comfortable, middle-class opinion leaders representing interests from small businesses, churches, and farming. They believe that there are certain basic moral (Protestant ethic), religious (Christianity), and social truths (monogamy, laissex-faire capitalism) that exist in what is fundamentally an unchanging universe. The job of the schools is to develop the capacity of mind for grasping these basic truths. This group is opposed to the schools teaching anything except the cultivation of the intellect primarily through exposure to certain great minds or subject disciplines. NEOPERENNIALISTS WANT THE TREND TOWARD EXPANSION OF SCHOOL RESPONSIBILITIES REVERSED AND RECOMMEND WE TURN TO THE PAST FOR APPROPRIATE LIFE-STYLES. Churches are to be reinvigorated by reassuming responsibility for moral and religious education. The traditional family is to be strengthened by taking back many of the responsibilities the schools have assumed for themselves such as sex education, health care, sports, vocational training, instruction in current events, and promotion of hobbies.

* Essentialism (ESS) Influence level: 32%

This value orientation is represented on the one hand by many people who are at or near the top of major

political and business institutions of society. Such people command power and often wealth and celebrity or at least have access to such. And on the other hand, the Essentialist values represent the majority of opinion leaders for citizens in the skilled or semiskilled occupations--the "silent majority" of the urban middle-class. The Essentialists believe in a fundamentally changing, evolving world--one that, however, changes only gradually. The main job of education, therefore, is to transmit ONLY THOSE CULTURAL ELEMENTS THAT HAVE BECOME THOROUGHLY ESTABLISHED AND INTEGRATED INTO OUR NATIONAL HERITAGE--such as language, history, computation, and essential character traits needed for an occupation and participation in the community. They are OPPOSED TO ANY CHANGES IN THE SCHOOLS WHICH THREATEN OR CHALLENGE THE STATUS QUO, i.e., that have not proven themselves to be absolutely essential. They call for more emphasis upon essential knowledge and skills and less upon student interest, freedom, immediate needs, personal experience, and personal initiative.

* Social Realism (SOC) Influence level: 25%

This value orientation is represented by well-educated, upper-level, white-collar workers and constitutes a sizable majority among the school administrators, some legislators, and others who formally influence

educational policy-making. They believe it is the job of the school to keep up with social change. The primary emphasis of the curriculum is TO HELP EACH INDIVIDUAL TO ADJUST TO MEET THE DEMANDS THAT HIS SOCIETY WILL PLACE UPON HIM AFTER GRADUATION. They favor moderate expansion of school responsibilities but experiment primarily with programs which promise greater efficiency in the learning of facts and skills. THEY ARE OPPOSED TO ANY PROGRAMS WHICH MIGHT WEAKEN THE POWER OF SCHOOLS or which are viewed with strong disfavor by the established interests.

* Experimentalism (EXP) Influence level: 11%

This value orientation is represented by empirically-oriented community leaders, scientists, and university faculty who write many of the textbooks and train the teachers. They believe in a dynamic, changing world in which knowledge is tested by human experience. The main purpose of education IS TO DEVELOP CRITICALLY-MINDED INDIVIDUALS CAPABLE OF SEEKING AND FINDING (at least tentatively) CREATIVE ANSWERS TO THE PROBLEMS THEY FACE IN SOCIETY. It is the schools' job, therefore, to help individuals become creative, self-disciplined problem-solvers in line with scientific ideas--i.e., fledgling scientists. Experimentalists favor a wide variety of teacher-guided curricular experiences where students

have the freedom, self-responsibility, and opportunity to learn by doing.

* Social Reconstructionism (REC) Influence level: 12%

This value orientation is represented on the one hand by liberal intellectuals trained in the social and behavioral sciences and represented most consistently among newscasters, authors, journalists, and student leaders. On the other hand, it consists of much of the vocal leadership of minority, disadvantaged, and various other socially oppressed groups in society. THE MAIN PURPOSE OF EDUCATION, they say, IS TO DEVELOP INDIVIDUALS WITH THE ABILITY AND DESIRE TO CREATE A BETTER SOCIAL ORDER ALONG THE LINES DICTATED BY CURRENT SOCIAL KNOWLEDGE. Schools should model the kind of society needed to bring about greater equality, justice, and happiness, and thereby prepare individuals to create or condition them to demand such a society.

* Human Potentialism (HUM) Influence level: 10%

Advocates for this value orientation are most often organized into vocal special interest groups composed of well-educated, upper-middle class college youth, young parents, and various writers and journalists associated with special institutes or university departments of psychology, sociology, and education. They often have influence over curricular materials and teacher training.

They hold that the main job of the school is to study the child and to develop an educational program or curriculum based upon the felt needs and desires of each child (as opposed to adult-recognized present and future needs of each child) and in accord with his particular stage of development on the road to self-actualization. Great emphasis is placed on individual choice and individual responsibility for that choice. Advocates of this position WANT TO ABOLISH THE MAJORITY OF CURRENT EDUCATIONAL PRACTICES from compulsory attendance to all grading and certification. They are AGAINST ANY PROGRAMS WHICH MIGHT INHIBIT THE INDIVIDUAL'S CREATIVE EXPRESSION.

* Biological Reconstructionism (BIO) Influence Level: 2%

This value orientation is represented by researchers and writers who are usually by occupation anthropologists, biologists, medical doctors, philosophers, or psychologists and who have access to influence through "informal channels" such as lecturing, friendships, study committeees, etc. They believe that man is increasingly ill-adapted for survival in modern society because his primitive instinctual nature and anachronistic social traditions make him unable to deal successfully with emerging capabilities for mass destruction, rapid social and technological evolution, or the construction of a truly "utopian" society. The only real hope for the future of civilization

is THROUGH A FUNDAMENTAL TRANSFORMATION OF BOTH MAN'S SYSTEM OF SOCIAL ORGANIZATION AND HIS BIOLOGICAL NATURE. The main job of the schools, therefore, is threefold: 1) promote youth and adult learning experiences which emphasize new programs of governmental, communal, and family organization for achieving personal self-fulfillment and improved child-rearing; 2) promote similar learning experiences which show the need for and promise of a biological transformation; and 3) have schools serve as the centers for testing and implementing programs which promise to further the social and biological evolution of the species. THE BIOLOGICAL RECONSTRUCTIONS WANT TO CONSIDERABLY EXPAND THE ROLE OF PUBLIC EDUCATION IN THE LIFE OF EVERY CITIZEN.

Table I summarizes the differences and commonalities of the seven value orientations. In the left-hand column there are seven statements of difference and a continuum with numbers from one to ten. Across the top are listed the seven educational evaluators. In the matrix to the right are numbers which show where on the continuum the opinion of each of the evaluators is with respect to the statements of difference.

These value orientations do not change during the course of the game. What does change, however, is the influence of power groups which promote these values.

TABLE 1

DIFFERENCES AND COMMONALITIES AMONG THE EDUCATIONAL EVALUATORS

	NEO	ESS	SOC	EXP	REC	HUM	BIO
1. Emphasis on the individual and self-fulfillment versus emphasis on the needs of the state and job performance.	4	8	5	3	9	1	7
Individual 1 _____ 10 State							
2. Emphasis on man's rationality and teaching for conscious control versus emphasis on man's irrationality and indirect control.	3	2	3	1	5	7	9
Rational 1 _____ 10 Irrational							
3. Emphasis on traditions of the past versus needs of the present versus preparing for the future.	1	3	6	5	8	5	10
Past 1 _____ 10 Future							
4. Control of learning by teacher versus control inherent in learning environment versus total learner control.	1	2	3	6	4	10	5
Teacher 1 _____ 10 Individual							
5. Emphasis on facts and subject matter versus techniques for learning to learn.	2	1	3	8	5	10	7
Facts 1 _____ 10 Learning							
6. Emphasis on the role of the school as preserver of the past versus maintainer of the status quo builder of a new society.	1	4	6	8	10	7	10
Tradition 1 _____ 10 New Society							
7. Satisfaction with schools today versus dissatisfaction.	8	2	3	8	10	9	8
Satisfied 1 _____ 10 Dissatisfied							

Both the selection of edvents and the occurrence of soci-events slowly but consistently change the influence levels.

It is quite possible that by the end of the game a group which is very weak in 1975 will be very powerful in 2024. It is also quite possible that a group relatively strong in 1975 will be extinct by 1995. A group is said to be dispersed when its influence level drops below zero. When this occurs, district decisions no longer affect the group and the group's value orientation cannot affect the satisfaction points the district may earn. The group can be revived to a positive influence level because of undesirable social events, such as a conservative reaction, a redistribution of resources, a revolution, or nuclear war. Its influence level can also continue to drop because of other social events. When its influence level drops below -70 it is said to be extinct because the possibility of its being revived to a significant influence level is very remote.

Until a group becomes extinct, however, a committee is wise to always consider its perspective when finalizing decisions in order to reduce the potential for a revolution.

At the end of each two-year planning period, the computer analyzes all changes in the influence levels of the evaluators and tells the committee whether the district has become more conservative or more liberal during that round. If the sum of the influence levels of the Neo-

perennialists, the Essentialists, and the Social Realists have increased one or more points during a round, the district is said to have become more conservative. If the sum is zero or less, the district is said to have become more liberal.

Section III

SOCIEVENTS

There are twelve socievents which may occur during each iteration of the game according to their probabilities at the given time. The first four are positive and result in increased income for the committees. The last eight are negative and force the teams to lose considerable sums of money if they occur. The twelve socievents (and abbreviations which will represent them), their probabilities of occurrence at the beginning of the game, and their costs are listed in Table 2:

TABLE 2

THE TWELVE SOCIEVENTS

Event Number	Initial Probability (Scale: 1-1000)	Gain (+) or Loss (-) by District Innov. Fund	Socievent Description
1	666	+ ⊄D* 2,225,000	National GNP growth (GNP) has resulted in a tax base increase for the district innovation fund.
2	90	+ ⊄D 2,625,000	Greater efficiency (GRE) in school administration, financing, and teaching.
3	220	+ ⊄D 8,625,000	An increase in community involvement (COM) and concern for public education.
4	250	+ ⊄D 6,750,000	Greater national interest (NAT) in public education has resulted in legislative enactments which provide an increase in funds.

*⊄D = STATOSDOLLARS

(continued on next page)

TABLE 2--continued

Event Number	Initial Probability (Scale: 1-1000)	Gain (+) or Loss (-) by District Innov. Fund	Socievent Description
5	65	- ØD 4,250,000	Political conservatives (CON) in STATOS are aroused over foreign achievements and the expansion of nonacademic curricula. A return to essentials is demanded of educators. Funds cut.
6	95	- ØD 3,500,000	Parent groups (PAR) have been involved in recent mass transfers, boycotts, and suits in protest over recent changes in the schools. Resulting damages and delays necessitate reduction in funds.
7	115	- ØD 4,500,000	Teachers (TEA) have recently conducted numerous strikes and acts of sabotage in protest over threatening new organizational and instructional programs. The resulting damages and delays necessitate reduction of funds.
8	125	- ØD 4,250,000	Student (STU) vandalism, riots, and protests have sharply increased because of irrelevantin inequitous, and excessively demanding new programs, resulting in damages and delays.
9	120	- ØD 3,500,000	Elite, minority, and religious groups have closed another 100 private schools (PRI). The result has been a rapid increase in public school enrollments and a decrease of funds.
10	55	- ØD 5,000,000	A number of accidental school disasters (ACC) have occurred ranging from travel accidents to unknown disastrous side effects of new experimental programs.
11	65	- ØD 6,250,000	A redirection of resources (RED) from schools to other institutions in society has occurred as a result of decreased faith in what schools can accomplish.
12	20	- ØD 125,000,000	The international arms race has provided many nations and revolutionary dissenters with advanced nuclear capabilities. Conditions for world safety are violated and 30% of your district has been destroyed in a minor nuclear holocaust (NUC).

Any or all of the socievents may occur in each two-year implementation period, but in some periods none of them may occur. The happening or nonhappening of a socievent is determined in a Monte Carlo fashion based on the event's probability of occurrence in that particular iteration. That is, a random number between zero and 1000 is generated by the computer for each of the 12 socievents. Then that number is compared with the actual probability of each socievent's occurring. If the latter exceeds the former, the event is assumed to have occurred. No socievent may have a probability number at any time less than eight chances in 1000 over a two-year period.

The occurrence of any of the twelve socievents has a possible cross-impact effect on 1) the probability of occurrence of all other socievents in the future, as shown in Table 3, and 2) the percentage of influence held by each of the seven educational evaluators as shown in Table 4.

In the left column in Table 3 are listed the 12 socievents. The numbers across the top represent the same 12 events. This table shows that the occurrence of a given socievent may increase or decrease the future occurrence of itself or any other socievent. For example, the occurrence of GNP growth causes the occurrence of socievents 1,3,4,5,7,8,9, and 12 to go up in the future, and the occurrence of 2 and 6 to go down. The information in this completed matrix is very valuable to players by helping

TABLE 3

CROSS-IMPACT MATRIX OF THE EFFECTS OF SOCIEVENTS ON EACH OTHER

Socievents*	SOCIEVENTS											
	GNP 1	GRE 2	COM 3	NAT 4	CON 5	PAR 6	TEA 7	STU 8	PRI 9	ACC 10	RED 11	NAC 12
1. GNP	6	-3	3	6	6	-3	6	6	6			1
2. GRE	3	3	-3	3	-6		6	3			-3	
3. COM		-3	3	-3	-3	-6		-3	6	-3	-6	
4. NAT	3	3	-3	3	3	3	3		3		-9	
5. CON	3	3	-3	-6	3			6	-6	-3	9	3
6. PAR		-3	3		3	6		-3	-6	-3	-3	
7. TEA	-6	-9		3	3		3		-3		6	
8. STU	-3	-6	-6	3	6		3	9	-3	6	6	-3
9. PRI		3	3	3			3					-3
10. ACC	-3	-6	-6	-6	6	9	3	3	-6	-3	6	
11. RED	3	3	-3	-6	-3		9	6	-9	-3	3	3
12. NUC	-180	-120	-120	-120	30	-30	-30	-30			60	60

*See Table 2 for Socievent Description

them determine long-range effects of the occurrence of various socievents; hence, which events must be purposely controlled and how to do it. The completed matrix shows the exact extent to which the probability of occurrence of each of the socievents is changed.

The occurrence of any of the 12 socievents not only affects the future occurrence of itself and each of the other socievents, but also the percentage of influence held by each of the seven educational evaluators. Satisfaction points earned or lost by adoption of edvents are

TABLE 4

CROSS-IMPACT MATRIX OF THE EFFECTS OF SOCIEVENTS ON EDUCATIONAL EVALUATOR INFLUENCE

SOCIEVENTS**	EDUCATIONAL EVALUATORS*						
	NEO	ESS	SOC	EXP	REC	HUM	BIO
1. GNP	-5	-5	2	2	3	4	1
2. GRE	-5	3	4	-2	1	-3	3
3. COM	3	5	3	3	-8	3	-8
4. NAT	-5	-3	3	-3	10	-8	5
5. CON	10	20	-8	-8	-3	-10	-3
6. PAR	10	5	5	-2	-4	-5	-10
7. TEA	-5	5	20	-5	-5	-10	-5
8. STU	-3	-8	5	3	3	8	-8
9. PRI	13	-10	5	8	-10	5	-10
10. ACC	15	5	-3	-3	-3	-3	-3
11. RED	15	15	-3	-5	-10	-3	-10
12. NUC	120	-100	-60	-40	80	-80	100

*See Section II (pp. 12-21) for description; for abbreviations see page 12.

**See Table 2 for Socievent Description

n o t summed directly to arrive at total satisfaction points, but must first be multiplied by the percentage of respective influence each of the seven groups wields over public educational opinion. This will be discussed in greater detail in Sections V and VI. Suffice it here to say that the occurrence of each of the 12 socievents increases or decreases the influence which each of the educational evaluators holds (on a scale from one to 1000), hence, indirectly, the satisfaction points which any given edvent may promise.

In the left column of Table 4 are listed the 12 socievents. Across the top are listed the seven educational evaluators. The table shows that the occurrence of any socievent affects the influence of every educational evaluator. For example, the occurrence of GNP gorwth causes the influence of the first two evaluators to go down and the last five to go up equal to the total number of points the first two went down. The information in this completed matrix is very valuable to players in helping them determine the long-range effects of various socievents on influence held by educational evaluators, hence, which events must be promoted to increase desired influence levels.

Edsurance

Districts may reduce the probability of occurrence of undesirable socievents through the selection of particular edvents. In a more direct way, districts may take precautions against the occurrence of these undesirable socievents through the purchase of edsurance (precautionary insurance against undesirable educational socievents). Edsurance consists of one or all of the following seven educational programs: a) community-school interaction groups with responsibility ot identify and alleviate areas of tension; b) school-directed community educational experiences (seminars, assemblies, film presentations, etc.)

for the purpose of educating the evaluators on critical issues; c) mass media programs explaining developments and proposals; d) organization of community referendums and action groups as well as change agents and infiltrators when necessary; e) publication of newsletters, papers, books, and magazines for local use to inform the public on various issues; f) purchase of insurance against theft, vandalism, arson, and even strikes; g) establishment of emergency funds.

When a committee decides to buy edsurance for any or all of the negative socievents, it is assumed that a professional staff is hired for the purpose of implementing one or all of the above programs relating to the given socievent.

The costs of edsurance are shown in Table 5. They are exactly one-half the probable long-range cost of a socievent's occurrence to the district if edsurance is not bought. Edsurance costs are recomputed at the end of each ten-year planning period and rise or fall according to whether the particular edvent's probability of occurrence has risen or fallen during the round.

If edsurance is purchased for a given socievent, then two things happen in addition to the costs which are deducted from the district account. First, the probability of occurrence for the socievent is temporarily lowered by two-thirds for the two-year period. Now the socievent can

TABLE 5

EDSURANCE COSTS AT THE BEGINNING OF THE GAME

Socievent Number		Socievent Description	Cost of Edsurance
5	CON	Conservative reaction	ȿD* 138,125
6	PAR	Parent protest	166,250
7	TEA	Teacher strikes	258,750
8	STU	Student riots	265,625
9	PRI	Student population increase	210,000
10	ACC	Accidents	137,500
11	RED	Redirection of funds	203,125
12	NUC	Nuclear war	Not Available
		TOTAL COST FOR ABOVE EDVENTS	ȿD 1,379,375

*ȿD = STATOSDOLLARS

still occur during that period. For example, say the probability of teacher strikes occurring in 1993 is 145. If the computer generates a random number between one and 1000 which is higher, teacher strikes do not occur in that year. If the computer-generated number is the same or lower, then teacher strikes occur. Now if edsurance is purchased in 1993 against teacher strikes, then its probability of occurrence is lowered from 145 to 49. Now the computer will have to generate a random number less than 50 for teacher strikes to occur. When the two-year period is over, the original probability of occurrence is reinstated.

Second, the purchase of edsurance also permanently lowers the probability of occurrence of the socievents for which it is purchased by one point.

Although the purchase of edsurance both temporarily and permanently lowers the probabilities for negative socievents, it would be more economical to purchase edvents with good long-range effects to lower these same probabilities of occurrence.

If edsurance has been purchased and this decision prevents the occurrence of an undesirable socievent, then the computer will tell the district which socievent would have occurred if the edsurance programs had not been implemented. Edsurance does not protect against nuclear war or revolution!

The Basic, Long-Term Multifold Trend

There is a basic trend in STATOS which is assumed to go back for over five centuries and which can be seen as a common, complex trend of interacting elements. This trend has important effects on both the influence levels and the socievents.

The basic, long-term multifold trend is for STATOS to become increasingly sensate (empirical, this-worldly, secular, humanistic, pragmatic, utilitarian, contractual, epicurian, or hedonistic) and egalitarian (meritocratic, democratic, and socialistic). In the school district,

this is expressed as a slow, long-range tendency for the four liberal value orientations (Experimentalism [EXP], Social Reconstructionism [SOC], Human Potentialism [HUM], and Biological Reconstructionism [BIO]) to gain influence and for the three conservative orientations to lose influence. This may be reversed, however, during some decades and accelerated during others.

In *SAFE*, this cycle of constant value changes due to technological, social, and international developments may cause a decade to gravitate toward "extreme conservatism," "moderate conservatism," "moderate liberalism," or "extreme liberalism." Because of the basic, long-term multifold trend toward liberalism, however, during any ten-year period there is only a 33% chance of one of the conservative countertrends occurring and a 66% chance of one of the liberal basic trends occurring.

Whichever of the four value shifts for a decade actually occur (and this is determined randomly according to the above probabilities), the computer will inform the district of the basic trends for the planning period at the beginning of each ten-year round. The effects of the given value shift are added to district influence levels on a two-year basis.

The basic, long-term trend not only affects the influence levels of the educational evaluators, but also the probability of occurrence of the 12 socievents.

If a conservative trend occurs, then GNP (growth), GRE (efficiency), COM (community involvement), and NUC (nuclear war) all tend to go up, while NAT (national involvement), CON (conservative reaction), PAR (parent protests), TEA (teacher strikes), PRI (private school closures), ACC (accidents) go down. If a liberal trend predominates, generally the opposite occurs.

Revolution

In addition to the possibility of the 12 socievents and the basic, long-term trend occurring as outlined above, there is another alternative development which may affect the district: revolution. The concept of "revolution" in the game is not to suggest a violent overthrow of civil government but rather the radical change of influence levels of the educational evaluators over public education in the community. A district educational revolution may result from rapid change in state or national government organization, new legislation, violent acts of students or special interest groups, or the new involvement of previously unconcerned power groups. It is assumed that with "revolution" the entire district administrative staff is fired and replaced!

The occurrence or nonoccurrence of a "revolution" is determined in the following way: During every two-year planning period, the computer asks itself whether

any, and if so how many of the seven sociopolitical groups have lost all influence in the district (i.e., their influence levels have dropped below zero) but who have not yet become extinct (by dropping below -70). If two or more groups in the district fit this category, then it is assumed that a potentially revolutionary situation has arisen. This does not mean, however, that an attempted revolution will take place, only that the potential for such has arisen.

To determine whether an actual revolution will be attempted, the computer generates a random number between one and 30 and then asks itself if this number is greater than the sum of the number of groups which have lost all influence in the district. If it is, then an attempted revolution does not occur. If it is equal to the number of powerless groups or less than that number, an attempted revolution occurs.

For example, assume that in 1997 the influence levels for the Experimentalists (EX) and the Human Potentialists (HUM) drop below zero; furthermore, the influence level of the Neoperennialists (NEO) has already dropped below zero in 1987. The computer generates a random number between one and 30. If this number is greater than three, no attempt at revolution is made during the next two years. If it is three or less, an attempted revolution will occur. The computer will continue to ask this question every two years as long as two or more power groups have lost all influence in the district.

Now if an attempted revolution actually occurs, it may either succeed or fail. The success or failure of the revolution is determined by the computer generation of another random number between one and 20. If this number is greater than the square of the sum of the number of power groups which have lost all influence in the district, the revolution is a failure. If the random number is less, the revolution is a success. For example, if two groups have lost all influence, then the random number generated by the computer between one and 20 must be four or less for the revolution to succeed. If three groups have lost influence, it must be nine or less for success. For four groups, it must be 16 or less; and with five or more groups, the success of the revolution is assured.

If the revolution is a failure, ØD 20,000,000 in damages and delays as well as a radical power change result. The influence of the most powerful group is increased by a number equal to half the sum of all other power groups. And the influence levels of the remaining power groups are reduced to half their previous value. The revolutionary groups lose a further 40 points. This means that power has been concentrated in the hands of the prevailing leadership and the revolutionaries are weaker.

If the revolution is a success, again ØD 20,000,000 in damages and delays as well as a radical power change

result. All previous power groups lose two-thirds of their influence in the district, while each of the groups which previously had no influence gain an equal share of the influence lost by the others. For example, assume that the Neoperennialists (power level -27) and the Experimentalists (power level -5) stage a successful revolution. And assume that the previous influence levels of the other sociopolitical groups is as follows: Essentialists 415, Social Realists 385, Social Reconstructionists 55, Human Potentialists 125, and Biological Reconstructionists 45. After the revolution and the $D 20,000,000 lost, the power structure would look as follows: The previous power groups would lost two-thirds of their power. The Essentialists would then be 137, Social Realists 127, Social Reconstructionists 18, Human Potentialists 41, and Biological Reconstructionists 15. The revolutionary groups would gain equally the amount of power lost (666 points) to make them: Neoperennialists 306, Experimentalists 328.

The success or nonsuccess of the revolution also affects the probability of occurrence of each of the 12 socievents. If the revolution is a success, then the probability of occurrence of each of the following socivents goes down: GNP -10, School Efficiency -10, Parent Protests -20, Teacher Strikes -20, and Redistribution of Resources -20, while the probability of occurrence of the

following goes up: Community Involvement 5, National Involvement 30, Conservative Reaction 20, Student Riots 10, Private School Closure 50, and Nuclear War 10. If the revolution is a failure, then the probability of occurrence of each of the following socievents goes down: Community Involvement -20, Conservative Reaction -20, Parent Protests -20, Teacher Strikes -20, and Redistribution of Resources -20, while the probability of occurrence of the following increases: GNP growth 10, School Efficiency 20, National Involvement 20, Student Riots 50, Private School Closure 50, and Nuclear War 5.

Whether the revolution succeeds or fails, it is to be noted from the above that Parent Protests, Teacher Strikes and a Redistribution of Resources all go down to some extent, while National Involvement, Student Riots, Private School Closure and Nuclear War all go up.

Section IV

EDVENTS

There are 60 edvents which are proposed during the course of the game. Each is listed in detail with its cost and according to its order of proposal in Appendix A. During the first ten-year period, the edvents are available as options in the following order:

First two-year period:	Edvents 1-12
Second two-year period:	Edvents 1-14
Third two-year period:	Edvents 1-16
Fourth two-year period:	Edvents 1-18
Fifth two-year period:	Edvents 1-20

Every two years two more edvents are added as options. After the tenth year, two options are subtracted for every two that are added so that there are always 20 options available, minus the ones already chosen, of course. No edvent may be selected which is not designated as an option for the period nor may any edvent be selected more than once.

In the first ten-year planning period, 1975-1984, the first 20 edvents are the options as shown above. For the second period, 1985-1994, the first ten options are gradually dropped and ten new ones are added. So the

options become 2-22, 4-24, 6-26, 8-28, and 10-30 as each of the five two-year periods goes by. From these must be subtracted, of course, any that were previously selected. For the third ten-year period, 1995-2004, the options are 12-32, 14-34, 16-36, 18-38, and 20-40. This pattern con-continues throughout the remainder of the game.

Edvents are to be thought of as experimental programs which are being debated in the district at the beginning of the implementation period in question. For example, Edvent #1 is Career Education and costs ⱿD 11,000,000 to implement; Edvent #2 is Vouchers and costs ⱿD 12,500,000 to implement; and so on. Each of these edvents has two categories of effects as shown in Tables 6 and 7.

The left column in Table 6 lists ten of the edvents which occur during the first round of the game. At the top are listed the seven educational evaluators. In the matrix to the right are listed the effects of the first two edvents on the satisfaction of the educational evaluators. The positive and negative numbers represent points on the following continuum: -3 -2 -1 +1 +2 +3 where +3 means the particular educational evaluator under which it is listed is very satisfied with this edvent and -3 means he is very dissatisfied. For example, the Neo-perennialists are moderately dissatisfied with Career Education but reasonably satisfied with Vouchers, while the Essentialists are reasonably satisfied with Career Education

TABLE 6

CROSS-IMPACT MATRIX OF THE EFFECTS OF EDVENTS ON THE SATISFACTION OF THE EDUCATIONAL EVALUATORS

Planning Period 1975-1984	EDUCATIONAL EVALUATORS*						
EDVENTS	NEO	ESS	SOC	EXP	REC	HUM	BIO
1. Career education	-1	+2	+1	+1	+1	-1	+1
2. Vouchers	+2	-2	-3	+1	+2	+3	+2
3. Accountability							
4. Authoritarian schools							
5. Family neighborhood learning centers							
6. Community nursery centers							
7. Televised home study programs							
8. Education as vocational training							
9. Community guidance and evaluation centers							
10. Experiential learning schools							

*See Section II (pp. 12-21) for description; for abbreviations see page 12.

and reasonably dissatisfied with Vouchers. The committees seek to adopt those edvents which the most influential socio-political groups strongly favor. These are the ones that will earn them the most satisfaction points.

A completed matrix in Table 6 is very valuable to players by helping them to decide which edvents will likely maximize satisfaction points. This matrix may be obtained by either of two means: players may fill it in themselves by intuition or they may ask for an opinion poll with such information. If the assignments at the end of this manual are used, a partially completed opinion poll is automatically provided for each of the five ten-year periods.

The adoption of an edvent not only pleases or displeases the various evaluators, but as with the occurrence of socievents, must be considered a social development which actually changes the influence levels of each of the groups. The degree to which a particular group's influence changes is dependent upon two things: a) the degree to which the evaluator is for or against the edvent, and b) the degree to which each of the other evaluators is for or against it. For example, if the Neoperennialists are strongly against an edvent and all the other groups are in favor if it, then the Neoperennialists stand to lose considerably more influence in STATOS than if they had others supporting their position with them.

What is important here for committee members to remember is that their choice of an edvent will raise the influence level of those evaluators who favor it and lower the influence level of evaluators who disfavor it. If all evaluators equally favor or disfavor an edvent, then no

influence changes result. But however much power one group gains, another must lose. So if many are for an edvent and one is against, the one who is against stands to gain or lose a great deal.

The mathematical equation for determining how many points are gained or lost is as follows:

$P = 1.5 (X - M)$

Where M is the sum of the satisfaction levels divided by seven (i.e., the Mean);

Where X is the satisfaction level of the evaluator in question;

Where P is the degree to which the influence level of that evaluator increases or decreases.

The choice of an edvent not only has powerful effects upon each of the evaluators but also upon the probability of occurrence of the 12 socievents as shown in Table 7. The left column in Table 7 lists ten edvents which occur during the first round of the game. At the top are listed the 12 socievents. In the matrix to the right are listed the effects of the first two edvents on the probability of occurrence of each of the socievents.

The positive and negative numbers in the matrix represent points on the following continuum: -6 -3 -1 0 +1 +3 +6 where +6 means the probability of occurrence of that socievent goes up by six points (on a scale from one to 1000), and -6 means it goes down by six points. For example, if

TABLE 7

CROSS-IMPACT MATRIX OF THE EFFECTS OF EDVENTS
ON EACH OF THE SOCIEVENTS

EDVENTS**	SOCIEVENTS*											
	GNP	GRE	COM	NAT	CON	PAR	TEA	STU	PRI	ACC	RED	NUC
1. Career education	+1		+1	+2	-1			-2	+2	+1	+1	+1
2. Vouchers	-1	-3	+2	-1	+2	-3	+3	-3	+4		+2	
3. Accountability												
4. Authoritarian schools												
5. Family neighborhood learning centers												
6. Community nursery centers												
7. Televised home study programs												
8. Education as vocational training												
9. Community guidance and evaluation centers												
10. Experiential learning schools												

*See Section II (pp. 12-21) for description; for abbreviations see page 12.

**See Appendix A for complete list of Edvents.

Career Education is adopted, the probability of GNP growth and greater Community Involvement in educational funding each go up by one point while the probability of a Conservative Reaction or Student Riots each goes down. A blank spot in the matrix signifies that no significant interrelationship occurs.

A completed matrix in Table 7 is also very valuable to players in helping them decide which edvents will most likely increase school income in the future and avoid deductions or losses. This matrix may also be obtained by either of two means: players may fill it in themselves by intuition or they may ask for it at the beginning of each ten-year period by commissioning a futurist forecast. If the assignments at the end of this manual are used, then a futurist forecast is automatically provided for each of the five ten-year periods.

Edvent Failure

Not all edvents which are implemented in STATOS, unfortunately, turn out to be successes. The success or nonsuccess of an edvent is dependent upon two things: a) the cumulative probability of occurrence of teacher strikes, parent protests, student riots, and a redistribution of resources; and b) the random selection of a number by the computer.

For example, assume that the probability of teacher strikes is 125, student riots 105, parent protests 70, and

a redistribution of resources 80. Then the cumulative probability of edvent failure is the sum of these four, or 380. The computer generates a random number between one and 2,000 after each edvent is implemented. If this number is above 380 the edvent is a success; if it is below 381, it is a failure.

If an edvent fails, then three things happen: a) only half the number of satisfaction points that could have been earned are actually earned; b) a power reversal results and those groups which would have gained influence lose half the influence they would have gained; those groups which would have lost influence, gain half the influence they would have lost; and finally c) all positive socievent effects are lost, but half the negative effects remain.

A committee can affect the probability of success for its edvents by reducing the probability of occurrence of teacher strikes, student riots, parent protests, and a redistribution of resources. These probabilities can be reduced through the implementation of edvents with good long-range effects or through the purchase of edsurance.

The computer will inform the committee every two-year period if the probability of edvent failure has gone up and will summarize this cumulative probability change at the end of each ten-year planning period.

The Null Option

There are many citizens in STATOS who are threatened by most changes which occur in society and generally speaking are most pleased when no change takes place, savings are accumulated, and taxes are reduced. The decision they like best about change, with a few exceptions, is the decision to avoid all change. This is called the Null Option in *SAFE*. Though it costs nothing to implement the Null Option, it has effects upon the socievents and may earn satisfaction points for the district just like an edvent. The only qualification is that no edvent may be implemented during the two-year period for the option to be effective.

In STATOS the various power groups view the Null Option according to the continuum from -3 to +3 used to evaluate all the edvents, where -3 means they are very much against the proposal and +3 means they are very much for it. The Neoperennialists rate the Null Option +2, Essentialists +2, Social Realists +1, Experimentalists -2, Social Reconstructionists -3; Human Potentialists -2, and Biological Reconstructionists -3. With the power structure as established at the beginning of the game, the implementation of the Null Option would earn the district 210 points and increase the influence levels of the Neoperennialists and the Essentialists each by six and the Social Realists by three while it would decrease the

influence levels of the Experimentalists and the Human Potentialists each by three and the Social Reconstructionists and the Biological Reconstructionists each by four.

As with all edvents, the implementation of the Null Option also has effects upon the socievents. The probability for greater efficiency, community involvement, and private school closure each goes down by two, while the probability for national involvement goes down by four, and for a conservative reaction down eight. However, the probabilities of student riots and a redistribution of resources each goes up by eight and nuclear war up one.

Section V

INDICES OF SATISFACTION

The objective of each district innovation planning committee is to earn as many satisfaction points as possible. The team that has accumulated the most points at the end of the game is declared the winner. This is not to suggest that the only concern of public educators in STATOS is the long-range satisfaction of various power groups. On the contrary, educators may have many concerns: training in skills, transmission of the cultural heritage, self-actualization of students and faculty, provision of fun activities for youth who are not wanted at home or in the job market, higher salaries and prestige for teachers, etc.

SAFE presupposes, however, that only when these above goals are relatively achieved will the influence groups tend to be satisfied. In this way, it is suggested that the overriding goal of educational policy-makers in a democratic society is the long-range satisfaction with the schools of those citizens who control them. It is the policy-maker's responsibility to inform his public through edvertising when his studies indicate that their wants and demands are in the long-run to society's and their own disadvantage. It is not his responsibility to autocratically

impose his will upon them.

There are three ways a team can earn points: 1) by implementing edvents chosen among the 20 options which are available during each ten-year planning period, 2) implementing the Null Option if the conservatives are strong, and 3) buying edvertising to persuade the evaluators that they like the district choices more than they thought they did.

Determination of Satisfaction Points

Every edvent has a predetermined effect upon the indices of satisfaction associated with the educational evaluators. These indices represent the degree to which each of the seven evaluators favors or disfavors the edvent. To convert the indices of satisfaction change into total satisfaction points earned or lost, three other things are needed: 1) the previous levels of influence associated with the seven evaluators, 2) the indices of influence change which result because of the purchase of the particular edvent, and 3) the socievents which occurred and their effects upon the influence levels of the educational evaluators.

For example, the computer will determine the total number of satisfaction points possible from the selection of Edvent #1 (Career Education) as shown in Table 8. Row A gives the indices of satisfaction change as taken from

TABLE 8

DETERMINATION OF SATISFACTION POINTS

EDVENT	EDUCATIONAL EVALUATORS*						
	NEO	ESS	SOC	EXP	REC	HUM	BIO
1. Career Education							
A) Indices of Satisfaction change	-1	+2	+2	+1	+1	-1	+1
B) Indices of Influence Change	-10	+7	+3	+3	+3	-10	+3
C) Previous Level of Influence	+80	+320	+250	+110	+120	+100	+20
D) New Levels of Influence	+70	+327	+253	+113	+123	+90	+23
E) Socievent Effects on Influence	-5	-3	+10	+5	+5	-5	-2
F) Final Levels of Influence	+65	+324	+263	+118	+128	+85	+21
G) Gross Satisfaction Points	-65	648	526	118	128	-85	+21
H) Net Total: +1280							

*See Section II (pp. 12-21) for description; for abbreviations see page 12.

Table 7. Row B gives the indices of influence change which result because of the selection of this edvent as described in Section IV. Row C gives the initial indices of influence which existed before this edvent was implemented.

At the beginning of the game Row C consists of the initial influence levels described in Section II and put on a continuum from one to 1000. Row D gives the new indices of influence for the evaluators as a result of

the implementation of this edvent. It is derived by adding B and C. Row E takes into consideration the socievents that occurred during the two-year period in which the edvent was implemented and shows how the influence levels have changed because of their occurrence. Row F if the final level of influence for the evaluators at the end of the two-year period. It is derived by adding D and E. Row G shows the satisfaction points earned or lost by the purchase of Career Education. It is derived by multiplying Rows A and F. The net total on Row H is the sum of the elements of Row G.

In preparing for a ten-year planning period, players can estimate how many points an edvent can earn them by just multiplying the indices of influence change (A), which are partially listed in the assignments in Appendix B, by the previous levels of influence (C), which are available in Section II at the beginning of the game and are provided by the computer at the end of every succeeding ten-year planning period. The products of (A) and (C) are then summed as shown in (H) to give an estimate of the total points any edvent might earn the team.

This technique is extremely valuable to players because it provides them with a means to determine which of the edvents among those available would be the best one to implement. The higher the net total is for any edvent, the more desirable it becomes; that is, of course, if the

long-range effects on the socievents are also desirable.

It should be noted again that the sum of the levels of influence for the evaluators always approximates 1000. As one group becomes more influential, another group must necessarily become less influential. As mentioned earlier, it is quite possible for some groups to lose all their influence by dropping their Row D indices below zero. When such occurs, the negative influence levels continue to be recorded, but no satisfaction points may be earned or lost from this group until its influence level rises above zero again.

Edvertising

It is assumed that a large percentage of the evaluators in STATOS are relatively short-sighted or ignorant on educational matters and can be persuaded by such means as commercial advertising, special community presentations, endorsement by influential leaders, etc., to change their evaluation of the desirability of any given edvent in a positive direction. For example, the Neoperennialists moderately dislike career education and hence rate it -1, while the Essentialists considerably favor it and rate it +2. Through edvertising a committee may change any of these ratings up to one full point in the positive direction. That means the Neoperennialists can be persuaded at least to take an indifferent position on career education and hence rate it 0, while the Essentialists can be

persuaded that it is the best thing that could possibly be done and rate it +3.

Through edvertising in this way, a committee can earn a considerable number of points and permanently change the influence levels of the evaluators in desirable directions. For example, in Table 8 Rows A and F were multiplied to get the gross satisfaction points earned for career education. Now assume that a committee decides to edvertise as much as possible on three rapidly declining influence groups in the district. This means it is going to persuade each of these three evaluators to like this edvent one full point more or dislike it one full point less. The new indices which result and the consequences of the decision upon the total points earned are shown in Table 9.

Row A gives the original statement of the degree to which the evaluators like or dislike the edvent as taken from Table 6. Row B shows how much edvertising the committee decides to implement (this is the maximum for the three low influence groups). Row C gives the new indices of satisfaction which result when Rows A and B are added. Row D gives some hypothetical previous levels of influence. Row E shows how these influence levels will change as a result of the edvertising. These changes are derived mathematically by the formula provided earlier. Row F is the sum of Rows D and E. The Gross Satisfaction Points

TABLE 9

EDVERTISING EFFECTS ON SATISFACTION AND INFLUENCE LEVELS

EDVENT	EDUCATIONAL EVALUATORS*						
	NEO	ESS	SOC	EXP	REC	HUM	BIO
1. Career Education							
A) Indices of Satisfaction Change	-1	+2	+1	+1	+1	-1	+1
B) Edvertising	+1	0	0	0	0	1	1
C) New Indices of Satisfaction	0	+2	+1	+1	+1	0	+2
D) Previous Levels of Influence	+5	+285	+325	+85	+265	+25	+10
E) Changes in Influence	+3	-2	-2	-2	-2	+3	+3
F) New Influence Levels	+8	+283	+323	+83	+263	+28	+13
G) Gross Satisfaction Points	0	+570	+323	+83	+263	0	+26
H) Net Total: +1265							
I) Additional Points Earned: 37							
J) Cost: ØD** 980,000							

*See Section II (pp. 12-21) for description; for abbreviations see page 12.

**ØD = STATOSDOLLARS

on Row G are derived by multiplying Rows C and F. They are summed to form the total in Row H. The additional points earned through edvertising in Row I result from both the changes caused in the indices of satisfaction and the influence levels. A total of 49 additional points are earned by

edvertising directed at the three low groups, but since this slightly reduced the influence of the four larger groups, 12 satisfaction points were also lost to make the additional points earned only 37. But the district was charged for the full 49 at ⊄D 20,000 per satisfaction point. The additional costs result from changing the power structure.

When edvertising is directed at the powerful groups in the district or at all groups, it is possible to earn up to an additional 1000 points. This would cost the district about ⊄D 21 million. The question is whether the committee could earn more points through the purchase of an edvent for an equivalent sum of money.

Two qualifications to the use of edvertising need to be noted. First, the committee may not edvertise for any group more than one full point. To make typing easier, the person at the terminal responds with a number between one and ten, where ten reprsents one full point, and numbers less than ten represent a fraction thereof. Second, if the satisfaction of an evaluator is already +3, then its satisfaction can never become greater and so edvertising with this group is not allowed.

Savings and Loans

If a committee decides to purchase more edvents than it can afford or is forced into debt because of the occurrence of various socievents, the computer automatically

assumes the district wishes to borrow the deficit sum at the rate of 5% per year. However, since it is assumed that loans are initiated randomly during the two-year implementation period, actual interest charged is only 5% for the two years.

For example, a committee may spend all but ⊄D 150,000 on the purchase of edvents. The occurrence of three negative socievents, however, necessitates that it borrow an additional ⊄D 9 million. At the beginning of the next implementation period, the computer deducts the ⊄D 9 million as well as ⊄D 450,000 in interest for a total of ⊄D 9,450,000. from the ⊄D 12 million the district receives in tax revenues.

A committee may also save extra funds that it has from one implementation period to the next at the rate of 4.5% per year or 9% for the two-year period. As with loans, it is assumed that savings are initiated randomly during the period, so actual interest earned totals 4.5% of all funds remaining at the end of each period.

If a committee goes into debt over ⊄D 30 million, the public increases its tax revenues by 10% of the total debt. For example, if a district is ⊄D 50 million in debt, the computer will increase its biennial income from ⊄D 12 to ⊄D 17 million, an increase of 10% of ⊄D 50 million, or ⊄D 5 million. This is possible because of an increase in the taxes levied on the citizens. The public, however,

is invariably displeased by the need for increased taxes, and the district loses 50 satisfaction points for every ₿D 10 million it has in debts if the total is still above ₿D 30 million at the beginning of the two-year period.

Another example of how debts and satisfaction points are related is when an expensive disaster occurs. Nuclear war immediately incurs a district debt of ₿D 125 million for costs of rebuilding the district. The public increases the tax revenues by 10% of the debt or from ₿D 12 million biennially to ₿D 24 million. Since interest amounts to ₿D 6.2 million, this is a net gain of ₿D 5.8 million in which to pay off the debt. Every two years, however, the district loses 600 satisfaction points because of the increased tax burden upon the public.

In order to discourage teams from incurring excessive debts, any team which is still more than ₿D 10 million in debt at the end of the game is declared bankrupt and loses 800 satisfaction points if he has not had a nuclear war and 300 if he has, for each ₿D 10 million in debts which remain. However, committees may go up to ₿D 10 million in debt without losing any satisfaction points.

If a committee manages to save a surplus over ₿D 30 million, the citizens conclude that the district doesn't need such a high biennial tax revenue and therefore reduce the tax levy by 10% of the surplus. For example, if a district has saved up ₿D 50 million, the computer

will reduce its biennial income from ⊄D 12 to 7 million, a decrease of 10% of SD 50 million, or ⊄D 5 million, until such a time that district savings fall below ⊄D 30 million again. The public, of course, is very pleased by the decrease in the tax levy and the district earns 100 satisfaction points for every ⊄D 10 million it has saved above ⊄D 20 million at the end of the two-year period. In the example above, if the district still has ⊄D 50 million in savings it will earn an additional 300 satisfaction points.

When tax revenues are changed, significant effects upon certain socievents also occur. Whevever taxes are increased, the probability of further community involvement goes down by ten points, and national involvement and a conservative reaction each goes up by ten points. Whenever taxes are decreased, all three of the above go down by ten points.

It is possible for the game to be terminated early before the year 2024 is reached. If a district is in debt, the computer will ask itself every two years if the district debt is greater than ⊄D 200 million. Such debts can occur with two or more nuclear wars and revolutions--a series of misfortunes which is very rare, but can happen if the committee consistently makes very poor decisions.

If the district debt is greater than ⊄D 200 million, it is assumed that war has destroyed the society, chaos is

rampant, and the schools are closed. The computer will type:

> *THE GOVERNMENT HAS COLLAPSED. PUBLIC SCHOOLS ARE FOREVER CLOSED. EDUCATION HAS RETURNED TO THE FAMILY, THE TRIBE, AND THE PRIESTS.*

The computer will then sum all that has happened in the game and terminate the program.

Section VI

GAME PROCEDURE: BRIEF SUMMARY

It is the purpose of this section to explain in greater detail exactly how the computer interacts with a team to simulate a future environment, and the techniques the computer uses to evaluate team decisions.

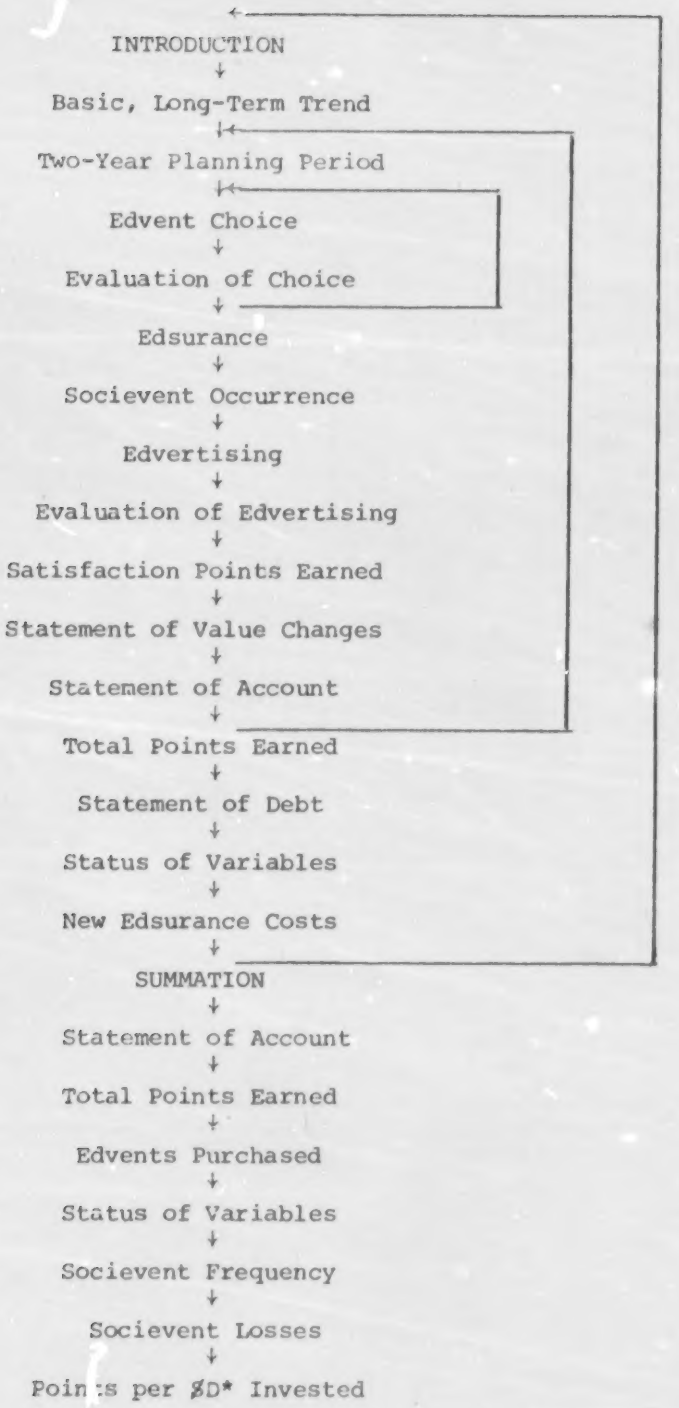
The Game Program

In the simulation-game *SAFE* the computer represents the world with which the district committee is interacting. It computes the effects of their choices upon the educational evaluators and the socievents, determines which socievents occur, serves as a bank and a critic, and finally summs it all up at the end. An outline of the computer-team interaction is shown in Figure 2 on the next page. A two-year run of the game on the computer and a ten-year conclusion are given in Appendix C.

When the team representative sits down at the computer terminal and types in his team number, the name of the game, and the round he is about to play, the computer will immediately respond by typing:

INTRODUCTION

YOU ARE ABOUT TO PLAY THE GAME SAFE --A SIMULATION OF THE FUTURE OF EDUCATION FROM 1975 TO 2024 A.D.



* ȿD = STATOSDOLLARS

Fig. 2.--Game Procedure Flowchart

YOU REPRESENT DISTRICT 1 AND ARE NOW RESPONSIBLE FOR EDUCATIONAL DECISIONS FROM 1975 TO 1984.

Depending upon the round the group is playing, the dates on this last statement will vary accordingly. The computer proceeds to determine whether the ten-year societal trend will be conservative or liberal. For example, the computer may type:

GENERAL SOCIETAL AND INTERNATIONAL DEVELOPMENTS OVER THIS DECADE WILL STRENGTHEN INFLUENCE GROUPS IN YOUR DISTRICT FAVORING MODERATE LIBERALISM.

Whichever trend occurs, its effects are computed during each of the two-year planning periods for the entire decade. The computer next types out:

YOU ARE NOW LIVING IN THE YEAR 1975. YOUR ACCOUNT HAS JUST BEEN CREDITED WITH SD 12 MILLION FROM TAX REVENUES.*

WHICH EDVENT WOULD YOU LIKE TO IMPLEMENT THIS YEAR? IF NONE, TYPE 0.

Players must now proceed to type in which of the first 12 edvents they wish to implement during this two-year period. After they type in the number of the edvent, the computer will immediately tell them three things: 1) whether it was one of the two best choices available for immediately earning satisfaction points, 2) whether it was one of the two best choices possible for long-range benefits--i.e., increasing the probability of occurrence of positive socievents and decreasing it for negative socievents, and 3) whether its benefits are worth the cost.

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*SD on the computer will mean ØD (STATOSDOLLARS).

If a team has made the best possible choice for earning satisfaction points, then the probability of socievents Greater Community Involvement* and Greater National Involvement each goes up by two points. If a team did not make the best choice, then these two go down by two points each.

If a team has made one of the two best possible choices for long-range benefits, then the probability of socievents Conservative Reaction and Redirection of Resources each goes up by two points. If a team did not make one of the two best choices, then these two go down by two points each.

These computations are figured out by the computer instantaneously and stored in its memory. The computer also calculates at this time the cost of the edvent and its effects upon the occurrence of all other socievents and the educational evaluators in general as given in Tables 6 and 7.

The computer next asks the players if they want to choose another edvent during this two-year period. If not, it proceeds to ask them if they wish to implement edsurance programs.** Then it computes by random selection according to the probabilities of occurrence as to which

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*See Table 2.

**See pages 27-30.

socievents occur,* but it types out only those socievents for which edsurance has not been purchased.

If players bought edsurance, the computer will now tell them which socievents would have occurred had they not bought it.

Players are then asked if they wish to purchase edvertising.** If they decide to edvertise, the computer will immediately tell them how much it cost them, how many additional satisfaction points they earned, and the extent to which influence levels were changed. It will also rank their choice with the edvent options for earning points versus the costs involved.

The computer now states that this two-year session has ended. It types out how many satisfaction points the district earned, notes whether it has gone into debt, and if so, charges it interest accordingly,*** and proceeds to begin the next two-year planning period.

This procedure just described, as is shown in Figure 2, repeats itself five times until the ten-year planning period is completed. Then the program terminates itself to allow committees to prepare for the next session.

At the end of each ten-year period the computer prints out the total points the district earned during

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*See Table 3.

**See pages 51-54.

***See "Savings and Loans" pages 54-58.

the ten years, reviews the status of the account and all variables (influence levels of the educational evaluators and the probability of occurrence of each of the socievents) and computes and states the new edsurance costs.

At the end of the fifth ten-year period (i.e., in 2024 A.D.) the computer sums the entire game by performing the following:

1) It reviews the account, and if the district has more than ₿D 10 million in debts, it is declared bankrupt and the team loses 800 (300 if nuclear war occurred) satisfaction points for every ₿D 10 million in debts remaining.

2) Total points earned are stated.

3) A printout of all edvents implemented is given.

4) Changes in influence levels and socievents probabilities are stated.

5) Financial losses due to the occurrence of socievents are given.

6) The total points per million ₿D invested in edvents is calculated. This tells the group which team made the best educational choices.

Decision Analysis

As shown in Figure 2, the computer is programmed to analyze most committee decisions to determine if they were the best ones possible, and if not, where they rank

in comparison to all the other possiblities. For this purpose three kinds of analysis are made: 1) a public relations analysis, 2) a futurist analysis, and 3) a cost-benefit analysis.

When the computer performs a public relations analysis, it takes all of the edvents which a committee may implement in a given two-year period and totals up the number of points each of these edvents could earn the team if the team were to implement it. This is performed by the computer through use of the technique shown in Table 8. After totaling all the points which each edvent could earn the district, the computer ranks the sums from the highest to the lowest and then asks if the committee choice is one of the two highest ones. If it is, the computer types:

> *YOU MADE ONE OF THE BEST POSSIBLE CHOICES FOR GAINING IMMEDIATE PUBLIC SATISFACTION.*

If the committee choice is not one of the two highest ones in the computer ranking, then it types:

> *YOU DID NOT MAKE THE BEST CHOICE FOR EARNING IMMEDIATE PUBLIC SATISFACTION. ANALYSIS RANKS IT X.**

When the computer performs a futurist analysis, it again takes all of the edvents which are the options a committee has available during a given two-year period and totals up from Table 7 all of the desirable effects and

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*X stands for the position the choice holds in the ranking.

then all of the undesirable effects which the edvent creates. But before it proceeds to sum the two, it weights each of the effects according to the particular socievent's probability of occurrence and consequent cost.

For example, career education has a -2 effect upon a Conservative Reaction and a +2 effect upon Nuclear War. If the probability of a conservative reaction is $\frac{65}{1000}$ and the probability of nuclear war is $\frac{20}{1000}$ then the weighting factor equals $\frac{65}{1000}$ X ¢D 4,250,000 for a conservative reaction and $\frac{20}{1000}$ X ¢D 125,000 for nuclear war. When these are multiplied out and then divided by 1000 to make them more manageable, they equal 276.25 and 2500 respectively.

The computer makes such an analysis for each of the 12 socievents and then multiplies these weightings by the change factors associated with the edvent. The products are then summed as described above--in accordance to whether the socievent is considered to be desirable or undesirable.

The totals are ranked from the highest to the lowest and the computer then asks if the committee choice is the one of the two highest numbers in the ranking. If it is, the computer will type:

YOU MADE A GOOD LONG-RANGE DECISION WHEN CONSIDERING SOCIEVENTS.

If the committee's choice is not one of the two highest ones, the computer will type:

*WARNING: YOU DID NOT MAKE THE BEST LONG-RANGE DECISION WHEN CONSIDERING SOCIEVENTS. ANALYSIS RANKS IT X.**

The futurist analysis described here and which the computer uses is rather complex and would be too time-consuming for players to use. However, a committee may quite accurately approximate this analysis by simply dropping the weightings described above. Instead, use Table 7 to add up the desirable and undesirable effects directly. Then double or triple the effects of events with high probabilities or which are very expensive.

The third kind of analysis which the computer performs relates the costs to the benefits. The computer takes the number of satisfaction points which each of the available edvents could earn a district during the two-year period and divides them by their cost.

For example, say that career education could earn a district 1,250 points and vouchers can earn it 980 points. If we divide the number of points by the edvent cost in millions of STATOSDOLLARS, we then get $\frac{1250}{11.0} = 136.63$ and $\frac{980}{12.5} = 78.4$ respectively. This shows that career education is almost twice the buy of vouchers. By this analytical technique it is quite possible for an edvent which promises fewer satisfaction points than another, but which costs considerably less to implement, to be ranked higher in a cost-benefit analysis.

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*X again stands for the position the choice held in the ranking.

Technically speaking, however, a cost-benefit analysis is not complete if the long-range effects are not taken into consideration. When the computer makes a cost-benefit analysis, it does the following: First, it divides the points an edvent offers by its cost as shown above and then it ranks the quotients from the highest to the lowest. Second, it multiplies each of the edvents in the cost-benefit ranking by two and adds them to the futurist ranking of the same edvents. This is a weighting factor which in effect says that the satisfaction-cost element is twice as important as the socievent-cost element. Finally, the new sums are then ranked from the lowest to the highest. The lower this total is suggests the higher the edvent was in both the previous rankings.

The computer next asks if a team's choice of an edvent is equal to one of the first two numbers in the computer ranking. If it is, then the computer types:

> *A COST-BENEFIT ANALYSIS SUGGESTS THAT YOU MADE AN EXCELLENT OVERALL DECISION.*

If the team's choice is not one of the first two in the computer ranking, then the computer types:

> *A COST-BENEFIT ANALYSIS SUGGESTS THAT YOU MADE A REASONABLE COST-BENEFIT CHOICE, BUT OTHERS WERE BETTER. IN COMPARISON, ANALYSIS RANKS IT X.**

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*X again stands for the place the choice holds in the ranking.

Of the three analyses described above, the cost-benefit analysis is the most comprehensive and therefore the most important.

The computer will also perform a cost-benefit analysis whenever edvertising is purchased. It divides the total number of points earned through edvertising by the cost the district incurs. Then it divides each of the edvent options for the period by its costs and multiplies the quotient by 0.6 to offset the probability of edvent failure. Then the computer ranks all of the edvents and the edvertising investment from the highest to the lowest on the cost-benefit analysis. If the choice to edvertise is not at the top of the ranking, then the computer will type:

> *IN COMPARISON TO EDVENTS FOR EARNING POINTS, YOUR EDVERTISING IS RANKED X.**

If the choice to edvertise is at the top of the ranking, then the computer will simply go on to the next issue.

Conditions may arise when the standard procedures of decision analysis outlined here must be modified. If one or more of the educational evaluators has lost all influence in the district, then the analysis of long-range effects is completely shifted from concentration on long-range effects of edvents on the socievents to analysis of the long-range effects on the power structure.

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*X again stands for the position the choice held in the ranking.

Edvent options which most please the revolutionaries are ranked the highest, assuming they do not increase the probability of nuclear war.

If two or more power groups have influence levels below zero and have not yet become extinct, the computer reports that crisis-level policies are now demanded and the cost-benefit analysis shifts its summation ratio from two-to-one in favor of the public relations analysis to two-to-one in favor of the futurist analysis.

APPENDIX A

The Sixty Edvents

Edvent 1 72

Edvent 11 77

Edvent 21 82

Edvent 31 87

Edvent 41 92

Edvent 51 97

EDVENT #1: CAREER EDUCATION; COST ØD* 11,000,000 72

The vocational education departments in schools have been relegated to an inferior position by taking mostly problem students who fail to make it elsewhere and by teaching them hobbies and crafts mostly irrelevant to the world of occupations. The family now fails to introduce youth into the world of meaningful work experiences and the variety of jobs available. Furthermore, the extended period of education nowadays tends to increase student frustration by prolonging dependency and providing few alternatives for demonstration of responsibility and competency.

It is therefore proposed that vocational education be taken out of the public schools, though it will still remain under district supervision, and be reorganized under the direction of Career Education Centers. For elementary students, the Centers will provide representatives of various occupations to work and demonstrate their skills at the schools. Teachers will receive curricula to introduce children to the variety of work experiences. For secondary students, special complexes to be called Career Development Centers will be built where students may spend three or more hours a day in one of 28 "slusters" of related courses which prepare students for jobs and careers. The Centers will run the apprenticeship programs for all the trade unions and students will be actively involved in on-the-job training. Greater Community Talent Banks will be established to match students with professionals who have offered to introduce promising youth into their careers. All students will be required to study in at least one of the career clusters at the Centers.

EDVENT #2: VOUCHERS; COST ØD 12,500,000

The school system is failing to meet the needs of minority groups and a growing number of special demands of middle-class students and parents. To make schools more responsive to public needs, to make them more accountable, and to give parents a wider range of choices, it is proposed that a system of vouchers be initiated so that students may attend any of a variety of public schools of their choice in their community.

Under the voucher plan curricula of various schools in STATOS will be arranged to fit the needs of particular groups. Some schools will be designed to especially emphasize the basic sciences; others, social adjustment; and still others, aesthetics through music or art or dance. Some schools will be self-directed open learning systems with much self-responsibility, community involvement, and free time; others will be strict, perhaps even ascetic or military-oriented. Some will be boarding schools in nearby parks, mountains, or deserts, while others focus almost entirely on home study.

Any public school may be redesigned and receive cash for vouchers providing it can 1) attract a minimum number of students (i.e., 100), 2) meet certain requirements of demonstrated integration, and 3) develop a viable curriculum. The family will assume a significant role in shaping the child's education through its participation in many community seminars and meetings as well as through private counselor visitations for purposes of presenting the alternatives available.

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* ØD = STATOSDOLLARS

EDVENT #3: ACCOUNTABILITY; COST: ⱷD 7,500,000

Parents and students are demanding that all social institutions become more responsible for stating goals explicitly, for demonstrating their achievements and for offering their clients meaningful alternatives. This concern has arisen in education especially, on the one hand, because of numerous successful suits in which courts have held school systems legally responsible for failure to teach basic skills and, on the other hand, because of growing national commitment to equality of educational outcome and rising expectations as a result of promising innovations in experimental schools.

It is therefore proposed that there be established an Educational Accountability Commission with the task to (1) define areas requiring assessment, 2) show discrepancies between stated objectives and their achievement, and 3) involve community groups in evaluating STATOS' educational needs.

Each school district will have responsibility for defining its specific goals and behavioral objectives. The State Board of Education will develop accountability programs and a procedure to evaluate and approve local district objectives. Profiles for general effectiveness of entire districts, schools, and individual teachers will be established and made public. Administrators and their teachers will be held accountable to meet minimum standards under penalty of wage losses or suit by parents and students. Lavish bonuses will be awarded for excellence beyond standards. Parents and students will be free to choose their teachers and schools, though curricula at all institutions will be very similar. Schools and teachers w-th inadequate enrollment will receive pay reductions.

EDVENT #4: AUTHORITARIAN SCHOOLS: COST ⱷD 3,500,000

Inner city schools are disintegrating into centers of crime, drug and sex indulgence as well as places for the propagation of teachings which incite social dissidence and revolution. Educators have lost respect and stand powerless before student rebels. School anarchy is spreading to the suburban districts as well. Factional interests and lenient court rulings have prevented any major reactionary programs.

It is therefore proposed that more authoritarian schools are necessary. What youth need is the discipline that broken families and a soft social life fail to provide. It is proposed that the old Boards of Education be replaced by single Commissioners solely responsible for operation and powerful enough to be placed above all factional pressures. Principals will be made relatively autonomous in their schools and teachers an impregnable authority in their classrooms. It is proposed that teacher strikes, student boycotts, and any other organized school disruptions be legally prohibited. Other than involvement in financing, politicians are to leave all educational decisions to the professional educators even as medical decisions are left to the doctors. The Courts are to uphold the status of the school as being in loco parentis beyond any possible successful assault even if an amendment to the Constitution is necessary to accomplish it. Only when educators have extensive powers to impose mild corporal and severe social punishments will schools once again become efficient, constructive institutions dedicated to preparing youth to participate in a democratic society.

EDVENT #5: FAMILY NEIGHBORHOOD LEARNING CENTERS; COST: ⊄D 16,500,000

Large numbers of adults in our communities have no opportunities to easily engage in learning experiences which meet their interests and needs. This is because such experiences are not available, citizens don't know about them, or they live too far away and instruction is too expensive.

It is therefore proposed that Family Neighborhood Learning Centers be established in STATOS where interested adults, children, and youth can work cooperatively on study units and learning packages without cost. Center or self-initiated groups will be devoted to everything from writing poetry to studying the latest political leaders as an election approaches, or from tours of local museums to travelogue films. Students who enroll will be freed from compulsory courses at the public schools.

The Centers will also initiate special instruction in child-care and training for mothers and provide learning games and toys for youngsters on a loan basis. It is proposed that STATOS initiate in each center a Learning Information Service which would have a topical computerized listing of special interests to community citizens. As new books, courses, articles, operas, films, etc., become available in STATOS, each citizen will receive a weekly printout of all new materials available which would be of specific interest to him. The printout will also contain a listing of other people in the community with similar interests and upon request the Centers will organize these citizens for appropriate social and learning encounters.

EDVENT #6: COMMUNITY NURSERY CENTERS; COST: ⊄D 14,500,000

All across STATOS large numbers of mothers with preschool children are returning to work and demanding new day-care facilities. Numerous studies are now showing that properly directed nursery facilities are extremely beneficial to enrolled children, especially when the mothers participate. Compensatory educational research has demonstrated that for children who are entered in specific programs at birth, IQs can be raised by as much as 30 points and average children can read at age three.

It is therefore proposed that STATOS establish low-cost Community Nursery Centers as part of its compensatory education commitment. These centers will have spacious indoor and outdoor playgrounds, special educational TV programs, educational games, and paraprofessionals trained in development of perceptual and verbal skills to help teach mothers the new techniques to maximize child development as well as further their own education. The Centers will have cradles, beds, bottles, and diapers for the children, and cafeterias and adult entertainment and learning experiences for women whose children are asleep. There will also be paramedical assistants who check over children and their mothers. It is proposed that tax credits, entertainment, free baby sitting, and food discounts be provided as incentives to encourage all mothers to attend whether they work or not, and that the Centers receive special additional remuneration for each mother and child enrolled from disadvantaged groups.

EDVENT #7: TELEVISED HOME STUDY PROGRAMS; COST: ⊄D 11,000,000

A global electronic university has been established with terminal facilities (CAI devices, rapid printers, holographic systems) installed around the world in thousands of institutions. It has exemplary 3-D lectures, demonstrations, and travelogues by the greatest scholars and public figures in the world on the basis substance of their fields of specialty. They are helped to present their ideas in ways both highly educational and at the same time recreational. These presentations are now available to the general public through the STATOS University Libraries together with instructional kits and CAI programs which allow for independent mastery of complex bodies of information.

It is therefore proposed that the STATOS Educational Network make these materials available to all students and teachers as well as to parents over local CATV or computer channels. To facilitate student use of the Network, it is proposed that a Home Study Program be initiated so that students who would rather learn certain skills or a body of information through Network presentions on CATV or a local computer terminal, may do so rather than take the subject in a class at their schools. Contracts for home learning will be made between parents, students, and the school on the one hand, and STATOS Educational Network on the other. Weekly or monthly meetings will be planned to assess progress and facilitate improvement of the program.

EDVENT #8: EDUCATION AS VOCATIONAL TRAINING; COST: ⊄D 6,500,000

The Supreme Court has just ruled it unconstitutional to impose requirements or qualifications on candidates for any form of employment or social distinction which are not measurements of behavior necessary to the performance of duties of distinct occupations. The Court argues that the use of tests, grades, graduation certificates, and qualification exams in schools and places of business (e.g., the whol basis of a general education curriculum), are generally irrelevant hurdles which unjustly function to preserve certain classes and professions at the expense of the public at large and the psychological well-being of the majority who are in the long run inevitably judged to be inferior.

Now that the use of diplomas and grades as well as unapproved qualification tests are recognized as illegal in STATOS, it is proposed that the public schools admit total failure in their attempts to achieve social equality through general education programs, and henceforth limit their efforts and responsibilities to direct vocational training.

To help accomplish this goal it is proposed that an independent Occupational Evaluation and Testing Agency be created to evaluate and certify training qualification programs for various occupations, apprenticeships, and professional schools. The agency will see that performance criteria and selection of applicants for learning programs are independent of years or place of schooling, age, sex, race, or family of applicant.

It is proposed that all instructional programs be rated according to their success in achieving various occupational goals. Any experiences in or out of schools which can be shown to train toward these desired goals will be accepted in lieu of compulsory attendance in traditional educational courses. Any other goals of personal development which students wish to pursue will be considered issues of personal discretion over which the state has no right to grade, test, or direct except by specific student request.

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EDVENT #9: COMMUNITY GUIDANCE AND EVALUATION CENTERS; COST ⊄D 17,000,000

With increasing social wealth and security, the needs of the majority of citizens in STATOS are shifting into the love, esteem, and self-actualization domains (Maslow hierarchy of needs). This is leading to much frustration and social unhappiness, for without professional counseling, many individuals have difficulty in our secular, rational, and impersonal society in finding ways to fulfill these higher needs.

Since school counselors and psychologists fail to be really effective for students in meeting the growth needs and serve mainly as apologists and disciplinarians for the system, it is proposed that they be separated completely from the school to form an independent Community Guidance and Evaluation Center. Such centers will cater to the needs of the entire community, remain open until midnight, and have staff available to counsel all citizens anywhere and at any time. Their function will be to help all children live more fulfilling, rational, and meaningful lives.

To accomplish this, they will provide free group therapy and psychoanalysis, sensitivity training, computer date matching, family counseling, serve as ombudsmen between state bureaucracies and/or businesses and the parent or between the frustrated child and his guardians, reference to learning or entertainment centers, bioenergetics, meditation, and yoga instruction, or just sources of answers to any imaginable question. Professionals at the centers will be paid to the degree to which social indicators suggest communitycounseling, personal growth, and information needs are being met.

EDVENT #10: EXPERIENTIAL LEARNING SCHOOLS; COST ⊄D 8,000,000

The traditional function of the school has been to impart facts about the adult world and to discipline the young for a life of regimented work. But mass media and increased youth mobility now provide the facts and modern enterprises have a rapidly decreasing need for regimented workers. As our society has become rich in opportunities for cognitive learning, it has become poor in experiences designed to fulfill man's emotional needs. The urban family and church are now largely failing to provide the socialization, life-style, and human meaning functions needed in a post-industrial society.

It is therefore proposed that the public schools in STATOS shift emphasis from academic (cognitive) learning to confluent or experiential (affective) education. Their prime concern will be with personality development, teaching of viable life styles, and provision of meaning and purpose in life. There will be much emphasis on the careful training of perceptions and emotions as well as self-understanding and self-discipline. Feeling and fantasy, expansion of consciousness and creativity, and adaptability to fluctuating circumstances will be stressed. Alternative schools will provide for differing emphases in personality development according to parental wishes. The learning of specific curricular content will be secondary to that of specified normative outcomes. For this purpose, it is proposed that STATOS rewrite its educational objectives to include normative outcomes and develop techniques to teach and measure a variety of life-styles.

EDVENT #11: INTERACTIONAL CATV SCHOOLS; COST: ⊄D 11,000,000

The use of CATV on an interactional basis is rapidly revolutionizing the business world. On the one hand, millions of professionals now attend conferences, perform clerical duties, and control automated equipment over their home or office CATV lines. On the other hand, shopping malls and ig city department stores are rapidly giving way to automated teleshopping and free home delivery.

It is therefore proposed that interactional CATV be used to extend the school into the community, STATOS, and the world on an educational basis. Sick students will be able to dial into their classes at school and interact during the lesson. Special conference courses will be conducted in which students are connected from their homes or at school with other local schools or businesses or political leaders in discussions of important issues and be able to observe ongoing research, medical operations, or factory procedures anywhere in the nation. CATV student talk programs will be initiated in which panels of students take calls from the public and respond to their questions. STATOS will provide facilities to connect up with other schools in the nation, national political leaders, or students abroad on an interactional basis. Traveling teams of students and faculty will be provided with portable facilities to report daily or weekly on their experiences to those people interested in the schools or community.

EDVENT #12: INDIVIDUALIZED LEARNING SCHOOLS; COST: ⊄D 8,500,000

Technology and pedagogical methodology are now sufficiently advanced to permit the individualization of all schools to the needs and demands of both parents and students.

It is therefore proposed that secondary schools be open seven days a week, at least 14 hours a day and 12 months a year. Most instruction will be individualized by means of programmed learning packets, CAI, or television. Courses for secondary students will go on college format with about 75% of student time in independent study and no more than three hours of classwork or labs a day. Students will have freedom to come and go at will. They will have courses or learning experiences throughout the day and which may vary in length from marathon sensitivity training for 18 hours straight, to mini-courses lasting only one week and 15 minutes a day. But traditional schools will be available for those learners who do not prefer this system or cannot adapt to the new self-responsibility.

Because individualized learning demands much more from teachers, it is proposed that all secondary instructors be required to have Masters' degrees now and Doctorates within ten years. They will be considered professors within their fields and expected to engage in research to improve learning. It is proposed that students be allowed to pull outof school three months each year at any time or in any combination of times during the year and that attendance at classes be noncompulsory, though demonstration of contracted learning may be mandatory.

EDVENT #13: EDUCATION AS AN OCCUPATION; COST: ØD 18,000,000

STATOS has truly become a learning society. Education, in effect, has become mandatory for life. Most occupations are not professionalized and almost all professional certificates require five-year educational renewals due to rapid change and job training obsolescence. With increased automation and sophisitication of job requirements, a much more highly educated work force is required, but only for shorter periods of time.

It is therefore proposed that average attendance by the majority of students at public institutions be extended from 12 to 15 years and that the extension be planned over the next 20 years to advance to 20 years of public education as the doctorate becomes the average educational attainment.

To help achieve such advances in public education it is proposed that 1) beginning at age 16, free separate housing anywhere in STATOS and a good income be provided all students according to their rate of successful educational advancement, 2) students be paid as much for successful learning as they would likely make at work in the business community, 3) adults be motivated to continue their education by provision of an income for successful learning equal to that of their most recent salary, but 4) 25% of any subsequent increments in salary which result from the advanced training be paid back to the STATOS public education system.

EDVENT #14: SOCIETY SCHOOLING; COST: ØD 9,500,000

Large schools have proven to be alienating, unnatural, and fail to promote maximum development of students because of the felt necessity for regimentation, age separation, and remoteness from community interaction they require in order to secure work. But experiments have shown that schools can be otherwise.

It is therefore proposed that all large schools be decentralized or broken down into small clusters with from 40 to 300 students. These clusters will form miniature societies of their own which parallel existing organizations in the adult world. For elementary students, they will be called Society Schools, Open Schools, or Free Schools, complete with currency, property, and markets. For secondary students, they will be called Street Academies or Schools Without Walls, and will include mini-factories, businesses, and professional apprenticeships. Instead of composition or reading exercises, students will write letters, newspapers, plays, or read instructions for operating machines and building equipment.

Students will have considerable power over their own schools through their own legislative body, court system, and law enforcement. These schools will be nongraded and fully individualized. Community businesses will be established right in the schools and social science labs right in the community.

EDVENT #15: COMMUNITY ARTS CENTER; COST: ⊄D 14,500,000

Arts in the schools have failed miserably, being relegated to the sideline and seldom developing any real talent. Increasing leisure for many has evoked frequent demands that STATOS establish aesthetic alternatives to the trivialities of art curricula in the school, to the public media in general, and to the materialism of a mass consumption society.

It is therefore proposed that Community Arts Centers be established as a new public institution under the STATOS Boards of Education and that all art education be removed from the schools. The centers will make art education available to the whole community and the school day will be shortened so students will have time to go there. The centers will be places where people work in the arts, not places to watch others. They will have studios for painting, sculpture, and instrumental recitals; places to design and model clothing, learning upholstering, interior decorating, cinema, and TV.

It is proposed there be established Fine Arts Parks to contain an Arts Center and a Community Arts Museum which will have local art and also a large collection of facsimiles of the world's greatest art which will be virtually indistinguishable from the originals. The museums will present weekly or daily lectures on various aspects of the culture and the arts. It is proposed that the parks include a Community Repertory Dance Theater to be housed in a Community Auditorium for presenting classical or avant-garde works, stage plays, etc. The auditoriums will also serve for local political meetings or other group meetings. The schools will no longer have auditoriums built in them or provide any of these functions.

EDVENT #16: FAMILY HEALTH CENTER; COST: ⊄D 13,500,000

STATOS has placed more emphasis on winning teams than on physical development. It promotes good sports programs which provide much for a few and little for the masses. Most school recreation areas are closed after school hours. Some are fenced so that they are inaccessible. Schools teach the three Rs but fail with the three Ds: diet, dexterity, and development. They spend millions for spectator sports arenas, but provide no free community pools.

It is therefore proposed that a new public institution be established under direction of the STATOS Boards of Education to be called the Family Health Center and that all school sports, health, and recreationprograms be transferred to the centers. It will sponsor hiking, bicycling, walking, exploration, climbing, golfing, tennis, dancing, etc. It will monitor the total physical development and health needs of all members of the families in the community. It will also have programs for dieting and giving up smoking or drinking. It will provide free pools, gyms, saunas, exercising and gymnastic equipment, and ball courts, but will provide few competitive game-viewing facilities.

Emphasis will be on doing, not watching. Schools will no longer have gyms or sports arenas. Trees will be planted where football fields once were and gyms will become libraries, causeways, cafeterias, laboratories, or even living quarters for students. The staff at the new Family Health Centers will include dentists, medical assistants, and health counselors to check on complete family health and growth. Health and sex instruction will be provided here on a group counseling and sensitivity training basis.

EDVENT #17: EDUCATIONAL RESEARCH INSTITUTE; COST: ⊄D 5,000,000

Educational institutions are frequently slow to change to societal needs because of their isolation from developments, new knowledge, and changes occurring in other sectors of society. But most importantly, they are slow to change because of a lack of competition, small-scale organization, and almost nonexistent research and development programs.

It is therefore proposed that 10% of all educational funds in STATOS be set aside to create a new research and development center to be called the Educational Research Institute. The Institute will establish a new system of schools for experimental purposes. Any students in STATOS may attend. The Institute will be liberally financed and staffed for purposes of developing and testing all suggested alternatives to the public schools at present as well as to help teachers and administrators adopt and implement successful new programs. For this purpose, teachers and administrators will have Thursdays off in order to think and plan.

New dissemination procedures and channels between universities, think tanks, and the Institute will be established. Teams will be employed for the sole purpose of presenting new ideas to schools and helping them incorporate such into local programs. Finally, it is proposed that part of the Institute funds go for developing an Educational Invention Patent Office which will provide liberal rewards and recognition to individuals or groups who develop and help implement viable alternatives.

EDVENT #18: STUDENT INFORMATION SERVICE; COST: ⊄D 6,500,000

Psychologists have developed and standardized diagnostic and prognostic tests sufficiently sophisticated to identify months to years in advance a large variety of positive and negative personality deviances from the norm. Together with extensive knowledge of family background and peers, they can accurately predict up to five years in advance high probabilities for student engagement in crime, drugs, rebellion, alcohol, homosexuality, gluttony, and religious or national fanaticism, etc., without the student even knowing he is being tested for such things.

It is therefore proposed that STATOS establish a Student Informations Service for the purpose of gaining extensive information about a student's family, his peers, and personality tendencies. Personality projectiles will be formed on each student and where important negative deviances from the norm are projected, parents and counselors will meet to discuss the problem, arrive at its probably cause, and present alternatives for appropriate treatment and educational redirection.

It is also proposed that special seminars be conducted to assure the public that its privacy is not being excessively invaded and that such a system is needed to maximize the development of both the children and the society.

EDVENT #19: YOUTH TOWNS; COST: ⊄D 17,000,000

The nation is much concerned about the need for racial integration, meaningful youth work experiences, and economization through centralization of services. Some cities have successfully accomplished all these in one grand plan while at the same time achieving slum clearance and urban renewal. They have established Youth Towns which are school-cities within a city. These towns handle from 60,000 to 100,000 students on up to 2000 acres of slum-cleared land. A modern Learning Park for the city's youth beyond about age 12 is constructed on the ruins of old tenements and factories. In addition to libraries, classrooms, and cafeterias, etc., Youth Towns are also a kind of educational shopping center with their own craft shops, newspapers, research centers, and even representative government run by the students. Most nonautomated tutoring and teaching is done by older students.

It is therefore proposed that STATOS use urban renewal funds to build such educational parks in city slum areas. All school buildings for secondary education will be sold or turned into community recreational centers. Youth Towns will be open all year round and all hours each day and night. They will be nongraded, individualized, and strictly competency based.

It is proposed that residential facilities be freely available for students who wish to live full-time in the towns. All students will buy their own clothing, pay their own medical insurance, food, etc., in a special currency which must be earned by jobs provided for all in the towns.

EDVENT #20: EDUCATION ASSEMBLY; COST: ⊄D 6,000,000

With the increasing importance and controversy over the role of schools in achieving greater social equality, vocational training, and personality development, there has arisen a strong demand for educators to democratically represent the interests of all the people.

It is therefore proposed that small districts be dissolved to reform on regional or state levels. A new board of much greater size will be formed to be called an Education Assembly. It will have from 50 to 200 members chosen according to quota by age, race, sex, ideological commitment, income, and education.

The Assembly will function as a legislative body with at least two parties (distinct from national political parties) with absolute power to establish, examine, and approve alternative ways of reaching educational objectives. Administrative tasks will be left to the system of educational specialists.

It is proposed that a CATV channel be reserved during prime hours to present all issues and decisions to the public. All really important issues will be polled and where strong diversity of opinion occurs, the issues will be publicly debated and instantaneous two-way TV referendums will be held. It is proposed that local communities form Councils for the Future of Education to serve as grass-root organizations to ascertain public wishes, personalize alternative policies, and promote publie involvement.

EDVENT #21: NATIONAL LIBRARY SERVICE; COST: ₲D 7,000,000

A nationwide library data bank has been established from which retrieval of information of all kinds is possible. Library scientists have developed techniques which make it possible for advanced computers to mull over separate subfields of the corpus of knowledge and organize them for use. Students may dial thousands of miles away for literature searches. Answers to almost any question can be displayed on video-like screens in the user's own reading room within minutes or at most hours. And reader-printers will reproduce documents on request. The Library of Congress now has acquired copies of all accessible documents in the world and provides very cheap microfilm copies of translated foreign items to any person on request.

It is therefore proposed that STATOS provide for all school information needs through the National Library Service. All community libraries will be turned into living and reading rooms or private and group study centers with computer reference terminals. The purchase of all new texts and reference works will be terminated, and with the exception of works with aesthetic value, all old manuscrips will be sold or given away.

It is proposed that centers be established to switch the National Library Service by cables or telephone lines to home CATV units or home computer terminals and that adult courses be established to teach local citizens how to use the new services. Now that all libraries will be computerized, it is proposed that computer operation and programming become mandatory from third grade on as well as instruction in the theory and structure of knowledge, its retrieval and usage.

EDVENT #22: EDUCATIONAL EXPERIENCE CENTERS; COST: ₲D 18,500,000

Educational simulation and gaming have merged with summer recreational programs to make possible Educational Experience Centers which can simulate almost any age in the past from a feudal village in the 12th century to possibilities of the future such as the life of an astronaut on Mars. Significantly, such simulations make possible for the young and adventuresome a "moral equivalent to war" by providing challenging and strenuous experiences which more than quell a man's lust for adventure and male bonding.

It is proposed that STATOS establish various experience centers to handle up to 50% of all children any time during the year. These centers will simulate conditions of the past, present, or future in lieu of many traditional courses and according to student interest and desire.

It is proposed that historical simulations also serve as "enclaves of the past" for the older or future-shocked citizens unable to adjust to the times. Simulations of the future will serve as research models for what STATOS might some day become. In simulating present societies, individual schools will imitate similar ones in other countries and play their international relations through computer hookups, read their newspapers, study their history and language, and have many classes taught by actual teachers from those countries. Field trips to the countries will come at the end of the year. In addition, each district will also have its own farm, desert ranch, mountain retreat with ski schools and boating club, and other planned experiences to enrich the lives of children.

EDVENT #23: PERFORMANCE CONTRACTING; COST: ⊄D 6,000,000

The inability of STATOS Public schools to change to meet the needs of youth and society has become increasingly severe. In times of rapid cultural change, large state bureaucracies with their tenured personnel and lengthy channels of authority are much too unresponsive to public needs. Government is finding it highly economical when implementing new programs to avoid the establishment of bureaucratic structures by employing "adhocracies" which consist of private companies contracting to perform specific services.

It is proposed that such performance contracting become the basic mode of operation in STATOS public schools. All public education will be performed by entrepreneurs who have specialized in teaching specific individual or group skills in the cognitive, affective, or skill domains.

Any individual or company may contract with a school for teaching given skills. No certification is required, only evidence that what they propose to teach, can indeed be taught by them, that there is a demand for the material, that what they teach can be independently measured, and that they will accept payment according to the success of their teaching. It is proposed that school buildings become community educational centers where entrepreneurs may rent spaces for their teaching. There is no requirement that teachers must conduct any or all of their instruction at the school. There will be established an independent evaluation agency to measure the success of teaching and establish rates of payment.

School administrators will function to coordinate the learning enterprises into a unified whole and counselors will help students to select the most meaningful and successful programs offered.

EDVENT #24: COMMUNITY SIBLINGS PROGRAM; COST: ⊄D 4,500,000

It has now been established that older children can effectively help younger ones in school and learn a great deal about themselves, the subject, and society in the process. This saves the school's money, diminishes the discipline problems, and probably provides youth a better education. More importantly, the average family now consists of less than two children. Many youngsters have no brothers and sisters. There is a real need for intimate intergenerational contacts and responsibilities other than those available in today's nuclear family.

It is therefore proposed that a Community Siblings Program be established to begin in the public schools and to extend through the life of the individuals. Each student at age 12 will adopt from the Community Nursery a child at age three. A Ceremony of Sibling Adoption of the two and their parents will seal a bond for life through acceptance of a second fraternal name. The Big Brother or Big Sister promised to take responsibility for the total development, happiness, and growth of the younger child by serving as tutor, baby sitter, mentor, model, and protector as directed by the child's parents and his own teachers. Every nine years as the younger child reaches 12, a new sibling is added and all older siblings attend the new ceremony. This makes it possible for every child to have an older brother or sister who is one, two, and three stages ahead of him in life and to whom he can turn for intimate advice and help. The brothers and sisters will be considered legal siblings throughout life. The oldest living sibling will direct the extended family of adopted siblings.

EDVENT #25: FUTURE-SHOCK CURRICULA; COST: ØD 16,000,000

The rate of change in STATOS is phenomenal--double what it was in the early 1970s. Increasingly people are becoming concerned about institutional lag, need for professional renewal, and termination of outdated materials and techniques.

It is therefore suggested that STATOS meet the needs of a rapidly evolving society by institutionalizing a Future-Shock Curriculum which will be based on the following four proposals: First, cirricula will shift from facts and crafts (except for therapeutic purposes) to theory of knowledge and learning how to learn. In a society that is rapidly changing, it is the process, not the content, that has greatest permanence and value. Second, it is proposed that STATOS establish in each learning center an Ideatron which will serve as a means to present choices to both students and the community (e.g., alternative life styles) which they didn't know they had before--to tell people what life will be like in newly evolving communities and social arrangements and also to present futurist thinking to familiarize the community with and prepare it psychologically for developments of the future. Third, it is propsed that STATOS establish Schools of Unlearning which are based on new drug therapy and advanced conditioning. Educators now consider it to be one of their major responsibilities to help people unlearn the old and forget taboos, to shake people up, to stimulate awareness and breat through staleness. Fourth, it is proposed STATOS establish a Center for the Synthesis of Knowledge in which the latest developments in all fields of world research will be synthesized and simplified for public presentation through the Ideatrons.

EDVENT #26: DIFFERENTIAL STAFFING; COST: ØD 7,500,000

The trend toward specialization of services has recently had a profound effect on schools all across STATOS. At least 50% of all districts engage in differential staffing procedures (i.e., group teachers according to different duties, specialization, and levels of responsibility for which varying amounts of salary are paid). Teachers are changing from dispensers of facts to intermediaries between learners and learning resources--learning facilitators. As such, the modern teacher is counselor, engineer, and instructor in the use of learning resources and the conduct of research. Paraprofessionals outnumber him two to one by assuming responsibility for the more mundane tasks. On the other hand, he is backed up on the district and state level by teams of professional educational development specialists who synthesize and develop new knowledge into appropriate learning sequences.

It is proposed that STATOS make differential staffing universal in its schools. To accomplish this it will establish an Instructional Technology Center to make specialist materials available to all schools in the system. The center will not only design instructional systems for courses, but also the associated learning activities, the materials for those activities, as well as produce the materials, interface the system with its target population, and evaluate the results. Once this is accomplished, STATOS will convert all remaining schools over to differentiated staffing by re-educating teachers in the new role of learning facilitators and in the use of paraprofessionals and the guidance of students through learning programs developed by the instructional technology centers.

EDVENT #27: PAROCHIAD; COST: ØD 17,000,000

The rapid decline of parochial school enrollment in the cities of STATOS is seriously adding to already existing public school financial problems, is treatening the pluralism and diversity of education which private schools have often made available, is weakening the intensity of moral instruction of millions of youth (thus contributing to rising crime rates), and is consequently furthering the decline of religion and ideals in STATOS.

It is therefore proposed that a Constitutional amendment be passed to legalize parochiaid in STATOS. Bible reading, moral instruction, and prayer will be made mandatory in all elementary classrooms and optional in secondary schools. Public funds will be used to support the following three programs: 1) provision of free rooms and instructional materials as well as free time to students who wish to have ministers or representatives of their own faiths teach them the moral precepts of their churches; 2) provision of free transportation, materials, and tax deductions for parents who have religious instruction conducted in nonpublic buildings; and 3) complete payment of all transportation, materials, and secular instructional costs in private schools.

In view of the imminent collapse of urban public schools, it is proposed that the private schools be financially encouraged through special bosnuses to accept mainly the disadvantaged, handicapped, racial minorities, and problem children where radical innovation, discipline, and indoctrination is more probably, while the public schools concentrate on the bright, well-disciplined college-bound youngsters--the kinds of students they are most successful in dealing with.

EDVENT #28: MARRIAGE TRAINING SCHOOLS; COST: ØD 9,500,000

For many years now all high schools and colleges have introduced basic courses in family social relations in the hope of reversing the trend toward divorce and unhappiness in marriages. They have had little effect. But co-ed dormitories with an atmosphere conducive to personal growth through the help of counselors skilled in encounter techniques have proven to be much more successful. A number of avant-garde colleges have organized marriage training experiences designed as part of the curriculum to help men and women relate as equals, see sex and beauty as secondary in important to self-actualization and self-discovery, and learn practical new techniques for child-rearing.

It is proposed that high school students will benefit enormously from similar kinds of experience. Organized marriage training experiences will reduce unrest, crimes, and build character and responsibility. It is therefore proposed that STATOS hire high school marriage inventors whose sole occupation will be to invent and test new forms and environments for adolescents to cohabitate and relate to one another as equals. Such experiences will be designed to strengthen and build lasting family relationships later in life, improve child-rearing, and focus personal interests toward self-actualization.

Marriage Training Schools might offer everything from trial monogamous and communal marriages to direct participation in community child-rearing. It is proposed the programs be developed in conjunction with local political, social, and religious groups, that children and parents be allowed to choose freely among the marriage training programs offered, and that extensive feedback on the results of each program be presented to all participants and concerned.

EDVENT #29: INTELLIGENCE DRUGS; COST: ⊄D 9,000,000

Remarkable breakthroughs in the use of drugs to affect learning have been finally achieved. We can now prolong or shorten memory at will, induce or prevent learning without usual reinforcements, enhance or retard transference, and increase intelligence by improving analytical ability. At experimental colleges where intelligence drugs have been used, most students master four-year curricula in two years and two-year vocational programs in one year. Lab experiments suggest that the average intelligence of people who take the drugs rises about 40 points and most memories approach photographic quality.

It is proposed that intelligence drugs be made available to all citizens in STATOS free of charge through the public schools. This will assure that all students and adults will have equal opportunity under safe and controlled conditions to take advantage of this development.

It is propsoed that special counseling serves be established to help students and parents alike adjust to their vastly increased reasoning and memory or forgetting powers, and to change their habits and goals to those characteristic and most useful to their new condition. It is proposed that all school curricula be rapidly upgraded to suit only the previously most gifted or semi-gifted. All instructors will be required to take the drugs to remain on the faculty unless their intelligence quotient is already above 160.

EDVENT #30: PERSONALITY DRUGS; COST: ⊄D 9,500,000

We now have available cheap nonnarcotic drugs for the purpose of producing specific changes in personality characteristics. Such changes are accomplished by regulating the memory as it relates to innate needs as well as by directly inducing chemical changes to produce euphoria, the control of fatigue, relaxation, moods, perceptual acuity, fantasies, aesthetic perception, and the sense of peasure. In this way, personality drugs can transform a person's outlook and disposition to fit any desired condition or meed any undesired vicissitudes. There are now drugs to help a person lose weight, stop smoking, foster or terminate mothering behavior, and increase or decrease sexual desire.

It is proposed that these drugs be used in STATOS Public schools, but that their administration be individualized to the needs of each student to assure maximum growth and learning and to minimize chances of misuse or danger. Such drugs will be scientifically administered at the beginning of each learning activity to heighten receptivity to the lesson objective and to temporarily terminate such biological distractions as hunger, fatigue, boredom, and sex. It is proposed that a special Center for the Administration of Personality Drugs be established for use by the entire community, but that such use of personality drugs be otherwise restricted on the open market in order to avoid misuse.

EDVENT #31: FAMILY-CENTERED EDUCATION; COST: ØD 3,000,000

Growing bureaucracies, high taxes, and spreading anomie in our megalopolises are forcing many people to fundamentally reassess their life styles and especially the tasks and responsibilities they have given over to the omnipresent public schools. Many fear the nuclear family is declining as the basic unit of society and that destructive new forms are emerging.

It is therefore proposed that the schools function to strength the family through the limitation of primary and secondary school curricula to the provision of traditional ideas, facts, and principles. All activities that have been added to the functions of the schools over the past 100 years such as health care, driver training, sex education, formal sports, training in leisure, administration of mood and intelligence drugs, boarding facilities, vocational training, etc., will be discontinued. Instead, it is proposed that the schools make widely available their libraries, resources, and drugs for parents to use if they please.

The public media will provide a range of educational programs and industry will offer job training apprenticeships. The church will take over aesthetic, ethical, and moral training, and the parents instead of teachers will become the learning facilitators of the future.

EDVENT #32: INCIDENTAL EDUCATION; COST: ØD 14,000,000

It is recognized now that youth today are more mature, biologically and intellectually, by far than at any previous time. Some reasons are more nutritious food, pervasive media, and many travel and living opportunities for youth almost everywhere.

Since the family and traditional schools have proven to be halting and constrictive of personality growth, it is proposed that all education beyond the sixth year of schooling be noncompulsory. Students will be provided with modest guaranteed incomes and edu-credit cards so they can live and study without cost anywhere in the world.

The chief occupation of educators will be to see that many activities in society provide incidental education. They will promote recreation and sports facilities, apprenticeships, travel, and direct instruction via various media. They will establish youth communities with living quarters in beautiful parks all across the nation. Any youth about age 12 will be encouraged to live away from home in these learning communities for a period of years.

Educators will match learner desires via computer to educational settings and materials anywhere in the country. Roaming scholars will be encouraged to take a group of students and serve as mentors or substitute parents for a number of years while they travel the world and learn. Laws will forbid qualification for jobs or schools of learning based on previous years of schooling, though demonstrated competency may be required.

Children under 12 will reside in special Summerhill-like boarding schools where professionals function mainly to prevent socialization, yet encourage maximum creativity, self-awareness, and self-responsibility.

EDVENT #33: PROFESSIONAL PARENTHOOD SCHOOLS; COST: ⊄D 16,000,000

All across the nation the institution of professional parenthood is springing up. Given the opportunity, millions of parents happily relinquish their parental responsibilities to specially equipped and licensed child-rearers. The "parenthood is fun" myth is dying as parents become aware of what is really required to optimize child development and as they also become legally responsible to do so. The unfit for parenthood are being screened out with the recent adoption of laws requiring parental licensing.

It is proposed that all early socialization occur under state-directed and approved circumstances and that the schools take on this function. For problem students or parents not withing to be burdened with child-care, it is proposed that child-care centers begin to shift into boarding day and night schools. Teaching will be done solely by male-female counseling teams with the goal of teaching styles of life as much or more than the facts of life. These teams will become professional parents and follow the children through their education.

For other youth, it is proposed that unlicensed biological parents be assigned professional child-rearing specialists who will function to guide both their educational and family experiences. All professionally licensed parents will be held accountable to maintain basic standards stipulated by state laws. It is proposed that detailed instruction and experience in child-rearing become a requirement for all youth such that those who later wish to be licensed, may easily obtain the right to have children.

EDVENT #34: SCHOOLS OF RELEARNING; COST: ⊄D 11,000,000

Juvenile crime rates of assult, delinquency, and drug abuse have been rising for many years and have reached the point that many urban schools have been forced to arm teachers and maintain guards at doors. Schools are now frequently referred to as "Community Youth Prisons." A small core of delinquent youth has been shown to be primarily responsible for most violent acts.

It is therefore proposed that STATOS public schools adopt the fabulously successful behavioral conditioning and brain implant reforms now revolutionizing the prisons. Troublesome youth will be sent to Schools of Relearning where they are taught to associate acts of violence (viewed via film or on stage) with extreme nausea (induced by injections). Upon completion of the program, small implants are inserted into the brain which automatically release the nausea-provoking chemicals when the now learned fear impulse is induced. After about a year the chemical is used up and the organic implant dissolves. But the learning is so automatic as to be permanent for life. In experimental studies, extreme troublesome students have undergone complete behavioral transformations in a matter of six weeks, and within five years the recidivism rate is less than 1%. The social effect of these "reschooled" individuals who return to their former learning centers is phenomenal. Other students with any inclinations for deviancy themselves are transformed out of fear that they too will be reschooled. The adoption of this technique promises to completely reform STATOS schools from regimented prison-like institutions to more open, creative, and free establishments.

EDVENT #35: EDUCATION QUOTAS; COST: ØD 6,500,000

The problem of equality in STATOS for minority groups, women, the aged, and the corpulent has become increasingly recognized. The schools have been severely criticized for teaching to maintain and perpetuate a norm which deprives millions of citizens adequate opportunities for self-respect, social security, and meaningful growth experiences.

It is therefore proposed that schools make true social equality their prime goal. For this purpose, courses will be redesigned to present new ways to look at women, blacks, the aged, the fat, etc., and new histories of their accomplishments and the ways society has misrepresented them. Only through integration and interaction will persons recognize their many commonalities and goals in society.

Therefore it is proposed that a quota system be established and every district inSTATOS be gerrymandered to maximize representation of citizens according to quotas of race, sex, religion, family income, etc. The quota concept will be carried into the classroom and all job training as far as possible. Teachers, administrators, and members of the boards of education themselves will represent the percentages of the population designated in the quotas.

It is also proposed, however, that special emphasis and compensation be given to deprived groups which are disadvantaged today because of injustices of the past through such means as lower entrance requirements, special tutoring, supplies or rooms, etc., and overrepresentation on quotas when such is needed to bring about desired changes.

EDVENT #36: COMPUTERIZED SCHOOLS; COST: ØD 15,500,000

Due to time-sharing, mass production, and new technological developments, the cost of computer-aided instruction is now low enough to make advanced individualization of instruction for all students possible. In addition to innumerable administrative chores now being done by computers, the new machines can 1) perform expert diagnostic service, 2) identify students by their voices, 3) track student whereabouts in learning centers by their body odors, 4) respond to random simple questions, and 5) of course, teach almost any subject by programs which not only respond instantaneously to student answers, but also to physiological conditions such as extreme tension, weariness, boredome, etc.

It is proposed that STATOS begin to build totally automated high schools and colleges where CAI and other advanced computerized techniques do all teaching, examining, monitoring, and counseling. Any functions of the schools which cannot be totally automated, with the exception of advanced job training, will be dropped from the curriculum. Seminars will be instituted to inform parents of the new potentials and also make these services available to them through direct lines from the learning centers to home computers. The function of teachers will be to design the systems and monitor the machines.

EDVENT #37: ADVANCED SEX EDUCATION; COST: ⊄D 7,500,000

We are in the midst of a sexual revolution in STATOS in which the double-standard is disappearing. A fundamental new consciousness, much bigger than morality, is emerging. Woman is becoming man's equal: aggressive and sexual. There is resulting a strong trend toward the depolarization of sex roles and openness about sexual differences and needs.

It is proposed that the schools accept responsibility and develop techniques to help young people to be fully aware of, control, and appreciate their own sexuality in each of its three human uses: sex as parenthood, sex as physical play ("recreational" sex), and sex as total intimacy between two people ("relational" sex). To accomplish this, it is proposed that teachers begin in the earliest grades with sensual stimulation exercises, nude dancing and sports, and frank discussions of all questions. At age eight all children will be immunized against conception for life unless a state-administered drug is used for men and women to wish to conceive. In puberty all gym exercises and rest rooms will remain nonsex-identified and fully integrated.

Drugs will be used to terminate sexual desire except at given times and until self-control under varying circumstances is demonstrated. It is proposed that the schools teach the art of and provide comfortable facilities for the practice of sexual intercourse as it relates to each of its three uses. Students will be encouraged to dress and act in roles of the opposite sex. Homosexuality will be openly accepted, though not encouraged. Nudity, where aesthetically appropriate in art, drama, and sports will be widely promoted.

EDVENT #38: EDUCATION FOR WORLD DEMOCRACY; COST: ⊄D 13,500,000

The conditions of modern society are very perilous and man has proven himself to be all too frequently irrational in his decisions. In view of this, it is felt that schools must do much more than just teach techniques of scientific inquiry, job performance, or self-fulfillment. The demand now is that schools inspire youth with the ideals of a world democracy, equality, and lasting peace.

It is proposed that there be established a program to be called Education for World Democracy. It is suggested that children will learn about and strive for equality, world brotherhood, and lasting peace only by living like and by forming emotional ties to the full range of people under all class conditions.

It is therefore proposed that a common world educational program be initiated to help youth identify with classes within society and differing societies within the world community. To accomplish this, all children, whatever their class or family origin, will be required to live and work with families in all social classes for a period of weeks to months each year. As youth mature, such family exchanges will take them from their communities and nation to peoples around the world.

All educational curricula will buttress these experiences by systematic denunciations of nationalism, chauvinism, bigotry, racism, etc., and emphasis on world brotherhood, social equality, and the need for world government.

EDVENT #39: CHARTER MYTH SCHOOLS; COST: ȿD 8,500,000

With the sharpening trend toward secularism and the slow demise of the nation-state system, there has developed a particular lacuna of ideological commitment to some great charter myth, some overpowering drive to destiny, some assurance of immortality and salvation, of selection and calling. This lacuna has invited innumerable ideological fantasies of questionable, if not destructive, worth to fill the void. On the one hand, the media have been particularly prolific in creating magical symbols to promote products by linking sex, popularity, beauty, and fulfillment to everything with a price tag. On the other hand, fanatics and "prophets" are becoming increasingly common with visions for everyone from Jesus Freaks to timid salvation-seekers. Many, however, never identify their cause for living and turn to drugs, sex, and war to escape.

Most humans need a sense of being part of a great adventure where a positive outcome is assured and where they feel personally chosen to take part. Sociologists are recognizing that "spiritual" commitment is the most effective technique known to assure behavioral conformity. Groups of scholars have now developed and proposed several dynamic charter myths and tested their viability in meeting many emotional needs and in furthering the happiness of many types of citizens, while simultaneously helping to provide national goals and commitments.

It is proposed that various learning centers begin a massive campaign to proselyte these great myths. They will organize local groups with initiation ceremonies and weekly rituals. They will also facilitate opposing group competition and even occasional persecution to promote missionary zeal, group solidarity, and lasting "spiritual devotion."

EDVENT #40: EDUCATION CENTRALIZATION; COST: ȿD 6,000,000

There is a strong trend toward centralization of government services in STATOS that is profoundly affecting education. On the one hand, greater demands for program financing, technology assessment, and research all require national coordination to assure maximum utility and efficiency. On the other hand, social lag and inequitous funding are almost impossible to change when each district functions as an autonomous authority on education--a problem that is leading to great social unrest.

It is therefore proposed that all educational services in STATOS be nationalized and directed from a central source. Finacing will be equalized from national income tax funds and dissociated with property taxes. Research and development will be financed and directed from a National Institute of Research in Education. Viable new programs will be rapidly implemented across the nation through a National Education Assembly to which each state sends elected representatives.

All curricula, library systems, testing, and evaluations will be standardized across the nation to permit ease of mobility and high quality instruction, with the exception of regional centers for research and development. The diversity of programs will be so large that almost all citizens can easily find instruction which satisfies their needs.

EDVENT #41: EDUCATION FOR SPACE TRAVEL; COST: ⊄D 17,500,000

Scientists have devised a nuclear-powered machine which deflects the lines of gravitational force. The new device makes possible rapid interplanetary and international travel for extremely low costs. When combined with self-contained dwelling units using life support systems that recycle water, air, and minerals, etc., to provide independence from the external environments, it makes man capable of living almost anywhere for any amount of time.

It is proposed that every district in STATOS purchase one of these self-contained machines for each school. It will have complete facilities for up to 500 persons for indefinite outings in outer space, under the sea, on the South Pole, or wherever learners and their families would like to go

It is proposed that the schools establish all kinds of new programs on space travel, earth observation, undersea life, etc., and that they establish a Center for Planetary Colonization in the learning centers for training of those students who wish to participate in colonization programs in the future.

EDVENT #42: WORLD GOVERNMENT EDUCATION; COST: ⊄D 10,000,000

It has been many years now since regional economic communities have been established around the world (Russia and Europe; All South America; United States, Canada, and Mexico; China, Japan, and India; New Zealand, Australia, and the Philippines). The major world communities have finally decided it would be in the interest of all mankind to end the nation-state system and establish a democratic world government: a United Socialist States of the World (USSW), with equal distribution of wealth, technology, educational centers, etc.

It is therefore proposed that the STATOS schools take a 20% cut in budget to facilitate wealth equalization. Extensive exchange plans with various states around the world will be arranged and students will be required to spend at least two years abroad working and studying.

It is proposed that all computers, libraries, and communication systems be rapidly expanded to make interaction between students and citizens of various world states an almost daily occurrence. STATOS schools will participate in programs for the rapid reconstruction of inferior schools, curricula, and materials in other states.

It is proposed there be established a World Educational Assembly to centralize and equalize the financing and development of all world educational programs.

EDVENT #43: WORLD LANDUAGE EDUCATION; COST: ⊄D 4,500,000

Linguistic scientists have developed a new language to help men learn, think, and write more rapidly and clearly. Its use will enable children more easily and rapidly to learn how to read, write, and reason as well as to communicate with all other people around the world. It will reduce by 50% the size of old books translated into the new language.

It is therefore proposed that STATOS schools teach the new language, beginning at age two, as the second language to all students and that it become the official language of the schools and the state.

Special seminars will be designed to retrain all teachers and faculty as well as interested citizens in the use of the new language. Special environments will be set up where it can be practiced through use in all types of social interaction.

It is proposed that all texts in the libraries by computer-translated into the new shortened world language as well as all curricula accordingly redesigned and upgraded.

EDVENT #44: COMMUNITY HAPPINESS CENTERS; COST: ⊄D 8,500,000

Educational centers have become increasingly responsible for the general welfare, growth, and happiness of local citizens. The initiation of suits against schools for failure to teach basic skills has expanded as school responsibilities and skills have grown. The Supreme Court has recently ruled in favor of a family which sued its district for failure to use from birth on the most advanced pedagogical, drug, and genetic counseling programs which were then known to promote individual growth.

This decision has made educational centers legally responsible for the immediate application of safe scientific developments which promote self-actualization. In effect, schools have now become legally responsible for individual happiness.

It is therefore proposed that community learning centers be reorganized as a form of extended family to be known as Community Happiness Centers. Various counseling, education, and recreation responsibilities will be newly correlated with public information sources to establish a profile of growth and happiness for each individual family.

These centers will be quite small and will interlink through the computerized media the ten to 20 families that belong. Citizens will be free to choose the happiness centers they wish to belong to. Children will become the legal responsibility of the centers and no longer of individual parents. Teachers will be members of families belonging to the centers.

EDVENT #45: SUPERSLEEP EDUCATION; COST: ⊄D 12,500,000

Chemical and electronic developments have now made it possible for humans to acquire all the sleep they need in one hour a day by means of a capsule and a supersleep conditioning machine. There is widespread demand by the public to take advantage of this new device, but costs are now too high for many individual families to do so.

It is therefore proposed that STATOS provide Supersleep for all children and adults in the public learning centers free of charge. Learning centers will be open 24 hours a day. Curricula will be vastly expanded to help citizens make good use of the new seven hours of leisure they just acquired. Adults will have ample time for involvement with children and for curricula activities. It is proposed that programs be expanded to include all adults in some child-rearing activities.

Since the GNP will likely double (due to acceptnace of third and fourth jobs to fill the leisure hours) school income will also double to pay for these centers. With bedrooms no longer necessary, many citizens will establish no residential facilities at all and will develop their lives around a 24-hour, four-part cycle: learning, pleasure, work, and politics. Schooling will now be required for life.

EDVENT #46: GENETIC ENGINEERING EDUCATION; COST: ⊄D 9,500,000

Molecular engineering and genetic surgery have advanced to the point that a major reduction of hereditary and congenital defects is now possible and will likely result in fantastic improvaements in the species Homo Sapiens in general. Government is now regulating who can pass on his genes unaltered. Intelligent animals are being bred for low-grade labor. Special human mutants are being developed for use on space missions, life in the seas, or on other planets. A program for the development and nurture of super-geniuses has been instigated here on earth.

It is therefore proposed that the learning centers become directly involved by promotion of creative courses and lab projects in alternatives for human evolution. Students will design and create simple animals and mutations of existing ones. Direct computer lines will be established with political and research centers to keep them abreast of world genetic developments and to inform leaders of student and public reactions.

It is proposed that STATOS begin rapid development of special education centers for the new breeds of intelligent animals as well as the forthcoming specialized ans super-bright children. It is also proposed that the learning centers organize opportunities for students and parents to directly communicate with animal minds. As intelligent animals become more common, the centers must initiate programs for the study of animal psychology, social and political rights of all intelligent species, etc.

EDVENT #47: INTELLIGENT ROBOT TUTORS; COST: ØD 18,500,000

New computer technology has brought about truly intelligent, yet relatively inexpensive machines capable of asking questions, creativity, and reasoning at IQ 200+ levels, with self-programming. These machines have been developed into complex robots capable of performing household chores, preparing meals, disposing of dishes, gardening, tutoring, fighting, and assembly-line work. They never tire or disobey and willingly work 24 hours a day. They are capable of self-repair and self-reproduction. They have replaced the automobile as the central feature of the economy.

It is therefore proposed that all advanced teaching machiens and learning devices be replaced by the new robots. Each student is to have one as his mentor to guide and develop him to his maximum. The robots will have direct access to all computerized knowledge and learning programs. Teachers will be reeducated to take on the new dual role of models of ideal human types for students to emulate (less the students model the robots), and as monitors, programmers, and, when necessary, destroyers of the robots.

It is proposed that many new seminars for adults be established to teach the use and control of the robots, how to adjust to a world without compulsory work, and the meaning of life.

EDVENT #48: BABYTORIUM EDUCATION; COST: ØD 4,500,000

Simulation of the placenta has been achieved and extrauterine development is now spreading. Gestation in the new "babytoriums," or in the vernacular, baby factories, tends to produce vastly more intelligent and genetically perfect children because of more careful provision of nutrient supplies, greater oxygenation, and space to grow in. It has become necessary to prohibit natural childbearing in the interest of public health and eugenics.

It is therefore proposed that the schools gear up for vastly superior human types and phase out all enrichment and special education courses. Schools will begin to sponsor courses for adults to help them understand the implications of the new development, the many advantages it offers them and their children and the future of mankind. Existing courses on human relations, family development, and childrearing will be rewritten to include the new babytoriums.

It is proposed that the schools conduct nine-month special seminars for women about to accept a child from the local babytorium, to help them choose the sex and general characteristics they want in the child (height, skin, eyes, and hair color, etc.) and that are available through state options, and to prepare them psychologically and intellectually to care for the super-child to be delivered.

EDVENT #49: EDUCATING THE CLONES; COST: ⊄D 8,000,000

The human clone has become possible and already thousands have been born. Because of the great potential for national and human furtherance of the species, the President has committed STATOS to a program of "tempered clonality" in which the most brilliant and talented humans alive will be replicated in large numbers through cloning techniques. Sexual reproduction will be allowed to assure variety and development of new types.

It is therefore proposed that the schools go on a talent search to identify and specially nurture those genetically perfect humans which might in the future provide cells for clones. Schools will develop and experiment with special settings for dealing with the new kinds of identity problems to come with the supergifted and super-similar children to be born.

The schools will conduct special seminars to adjust the public to the idea of a superrace of clones, fill-in historical precedents for the concept of an elite governing body, and show how it will help the overall development of the country as a whole by making STATOS once again not only number one in the world economically, but intellectually and genetically too.

EDVENT #50: SCHOOL SUPERFOOD; COST: ⊄D 9,500,000

Gleaming factories have emerged for synthetic food production. It is now possible to manufacture all the nutritional needs of humans at every age and to put them in one delicious meal to satisfy the hunger urge for an entire day, week, or month.

It is therefore proposed that STATOS take responsibility to see that all children in the schools eat this specially prepared meal some time during each week or month. New courses will be introduced on the history of eating with special emphasis on the tremendous loss of time, ubiquitous gluttony, and universal ill-health presuperfood man suffered under, and the fabulous new freedom he enjoys now that he is no longer burdered by this necessity.

Food consumption will be taught as an art to be enjoyed occasionally for its aesthetic and sensual pleasure. Since STATOS law requires all adults to consume this monthly energy meal at the learning centers or places of employment in order to minimize ill health and disease, eating in the home except for occasional parties is being terminated. Most new condominiums are being built without kitckens. This is resulting in substantial social savings and higher tax potentials for the schools.

EDVENT #51: ADVANCED PERSONALITY DRUGS; COST: ⊄D 9,500,000

It has finally become necessary to immunize a person against morbid infatuations and devotions to tribe, nation, religion, or other humans and to control man's primitive and egocentric behavior. Human instincts permit a wide margin of error that is inconsistent with the present survival emergency in the world. New drugs have been developed which provide direct psychotechnical intervention and function to stabilitize and make dominant the moral and ethical propensities of man and subordinate, if not eliminate, his negative and primitive behavioral tendencies.

It is therefore proposed that STATOS schools function as centers for advanced drug surgical implants and monitoring programs designed to reach all citizens in the state on an equal basis and free of charge. The schools will conduct special seminars for children and adults alike on the use and misuse of the new drug implants and safety techniques that will be performed.

Special simulations and shows will demonstrate the drugs' efficacy in helping to solve personal, social, and world problems by their ability to stifle both egocentric and altruistic inclinations (which have been proven to have a chemical basis), thus allowing the rational mind to achieve greater dominance.

It is proposed that special seminars be conducted for teachers to help them deal with greater student rationality and to learn ways of identifying and helping students who choose not to take the drugs or on whom the effects have worn off.

EDVENT #52: SCHOOLS FOR PARTICIPATORY DEMOCRACY; COST: ⊄D 7,500,000

Until recently, STATOS political parties have been loose confederations of state and local boss systems. Politicians have represented the interests of their local districts and have assumed that such a pluralistic system would produce the general welfare. But the problems of our times defy local efforts to deal with them. A new model of politics is emerging which considers the world a complete ecological system.

It is proposed that a new participatory democracy suited to the conditions of an intential society be instituted through the public learning centers. Teams of multidisciplinary experts have designed models that contain mathematical expressions for almost every conceivable ecological and social problem as it relates to similar problems elsewhere throughout the world.

It is proposed, therefore, that political positions be represented on the level of every community learning center. Computer terminals with multimedia display consoles will portray in pictures, figures, and graphs the foreseeable implications of alternative political policies for the community and the nation. Local groups will discuss the issues with experts at home and abroad and by nightly instantaneous referendums determine which bills to pass or reject. Representatives will no longer be elected to decide on political issues at national or world congresses, but some will be appointed to see that the technocrats present the problems and the alternatives formulated to the public objectively.

EDVENT #53: SUPERCONTROLLED ENVIRONMENTS; COST: ⊄D 17,500,000

Three-dimensional television and movies were perfected in the late 1970s and have now developed into advanced holovision techniques where the picture surrounds the viewer on all sides. Holovision has now been combined with responsive environments to transform the make-believe into the perception of reality--supercontrolled environments. Experience centers have been established around the nation where one no longer goes to see the movies, such as "Clockwork Orange," one now participates in them and their outcomes. One may even believe he has been wounded, suffer death, and resurrect to live in some fantasy-land beyond. Learners can either program the outcome themselves, have it occur on a random basis, or accept a preprogrammed package. The techniques are now so perfected that few indeed can separate the real from illusion while in the simulators.

It is suggested that these new simulators will serve as excellent teaching aides. It is proposed that there be developed a sequence of environments to cover the history of mankind. Each child will relive the history of the species and both intellectually and emotionally sense its successes and suffer at its failures. It is also proposed that simulations be developed of all imaginable future developments so that the young may participate in designing the future of the nation, see the issues from many possible angles, and reflect on all probable consequences. Students will be taught techniques for designing their own supercontrolled environments. Parents will be encouraged to participate in a variety of such experiences.

EDVENT #54: EDUCATION FOR SUSPENDED ANIMATION; COST: ⊄D 8,500,000

Long-duration coma, hibernation, or suspended animation has been perfected now. Men can safely move into frozen storage for years to centuries. All across the country citizens with incurable diseases, the weary of life, or the adventuresome, have chosen to move into another century and another time.

It is proposed that suspended animation could be a profound learning experience by helping the young to understand the meaning of death, birth, time, progress, history, and many other aspects of human experience which are never so overwhelmingly sensed as when one has been "dead" for ten to a thousand years. Therefore, it is proposed that all children be encouraged to have this experience while in their growing years. Schools will institute seminars to promote hibernation among the adult population by showing its efficacy in achieving happiness, prestige, and a sense of adventure as demonstrated by conversations with families already revived. It is proposed that special instruction be given to prepare the departing for the experience, even "funerals" for families which depart, possibly, forever from loved ones.

It is proposed that all faculty be required to participate in a hibernation experience to enhance their status in the eyes of the young.

EDVENT #55: INSTANTANEOUS EDUCATION; COST: ⊄D 16,000,000

Man-machine symbiosis has been achieved by linking the human brain to a computer. Such direct electrical stimulation can be used to teach most knowledge and many skills instantaneously. It has also facilitated the interconnection of many minds into a "mass-mind" learning experience. Even now techniques are being developed such that decisions of national interest can be decided on a national mass-mind instantaneous referendum. Man is thus able to vastly improve his social and mental functioning.

It is proposed that STATOS immediately adapt its computers in all learning centers to facilitate use of the new technology of instantaneous learning. All academic courses, CAI and CATV programs will be dropped. All drugs for improving memory and intelligence will be automated. Children at age two will be required to have the necessary surgical implants.

It is proposed that STATOS establish a Center for Man-Machine Symbiosis to develop and/or purchase programs for instantaneous learning, to direct such services so that all children will receive them equally, and to extend them to the public and provide the necessary counseling for appropriate adjustment.

It is proposed that the Schools of Unlearning develop similar instantaneous programs for directed forgetting. Teachers will now specialize in child emotional growth and the limits of genetic manipulation. It is proposed that local learning centers prepare to function also as centers to coordinate "mass-mind democracy" through which all citizens may participate in national decisions.

EDVENT #56: MENTAL TELEPATHY EDUCATION; COST: ⊄D 4,000,000

A team of Russian scientists has discovered the mechanism behind mental telepathy. It now fits into the physical picture of nature. American and Japanese engineers have developed small and inexpensive amplification devices such that all individuals can read the current thoughts of each other's minds with ease. Students are beginning to bring these devices to school.

It is therefore proposed that STATOS give a crash program in training all teachers and administrators techniques of thought control as well as methodologies to use the new devices pedagogically. It is proposed that new courses be designed to teach students thought control and to use the ESP machines in their daily lives to enhance interpersonal communication. Special experiences will be designed to help them adjust to the radical changes of attitudes toward sex, privacy, and even human nature that ESP is causing. And since the machines will make students much more politcally and socially sophisticated, it is proposed that all learning experiences be accordingly upgraded.

EDVENT #57: EDUCATION ORGASMS; COST: ⊄D 10,000,000

As a result of research with drugs and electrode implants in the brain, scientists have found ten human "pleasure centers." Simultaneous stimulation of the centers in various combinations produces a mystical ecstasy which makes hallucinatory drugs or sex totally incomparable and blasé by comparison. Inexpensive solid-state implants have been developed which permit random stimulation of the centers. A new industry is emerging in the form of "pleasure cafes" which has programs for manipulating the brain's pleasure center of people who have purchased the implants. The cafes have shown that stimulation can be enormously enhanced by participation of other humans and telepathic recognition of mutual ecstasy.

It is proposed that the art of writing programs for achieving induced peak experiences via brain-implants to the ten pleasure centers be taught and directed toward educational purposes. Automatic transceivers will be given each child which will induce "orgasmic-like" experiences in learners as reinforcements for desired display of cognitive or affective learning skills. Sex education will begin to be phased out as the new induced learning orgasms vastly supersede all other pleasures. All learning exercises must be upgraded to handle the much more highly motivated students.

It is proposed that seminars be established to reassure skeptics of positive benefits in the new program. Personal demonstrations, results from long-range studies, and viable plans for prevention of misuse will reduce most opposition.

EDVENT #58: AUTOMATED CHILDHOOD; COST: ⊄D 14,500,000

New computer technology has been combined with surgical implants to make it possible to place a man under constant surveillance without his ever becoming aware of it, even to the extent of controlling his moods, desires, and behavior. Usage is widely practiced in the state for treatment of criminals and deviants who no longer are penned up like animals, but are allowed to interact freely with the citizens. They know there is no escape from it. Relatives and friends help determine the programs to guide their loved ones and even participate in monitoring the surveillance equipment.

It is therefore proposed that such implants be surgically inserted in all children born. Surveillance equipment will be put under control of the schools until such persons reach adulthood, at which time the implants will be removed. These implants will save enormous costs and trouble in the normal administration of various mood and intelligence drugs already dispensed by the schools and will increase learning by the avoidance of delays. Parents too will appreciate the model children which result from automated childhood.

It is proposed that seminars be conducted for the public to assure citizens of the safety of the techniques and demonstration of their usefulness. Citizens will be reassured that all measures are being taken to prevent misuse. It is proposed that automated equipment be purchased to perform the extensive surveillance requirements and that teachers be retrained for the new conditions.

EDVENT #59: WORLD RECONSTRUCTIONIST EDUCATION; COST: ⊄D 6,500,000

This month a manned flight to Jupiter identified and captured a strange vehicle from some other part of the universe. It is unmanned and apparently abandoned, but extremely sophisticated electronically. It is obviously a stellar probe from another galactic system and proves the existence of highly intelligent beings beyond the earth. World-wide alarm is caused by its discovery. Schools are severely criticized for not being sufficiently academic and a sputnik-like crisis is precipitated.

It is proposed that the schools offer an intensified program for the gifted in space technology, communications engineering, and weapons defense. Schools will become local coordinating agencies in case of invasion.

It is proposed that STATOS initiate adult and student seminars on man's new place in the universe, creative writing on what life must be like elsewhere, and experiential environments simulating possible future alternatives. Most importantly, however, world political unity has resulted from the external threat and has led to a new consolidation of power in world government.

It is therefore proposed that all community learning centers be more firmly linked to the World Education Assembly, not only by sending representatives to it who allocate educational funds, but by being legally responsible to the Assembly and World Government for the implementation of programs to reconstruct society according to democratically-determined world priorities.

EDVENT #60: EDUCATION FOR IMMORTALITY; COST: ⊄D 8,000,000

Chemical control of the aging process of the human cell together with growth and implantation of new organs and limbs has made possible the extension of life up to as much as 200 years. People can now choose their age and remain there for many decades without noticeable effects. With biological immortality expected within 50 years more research, the STATOS legislative assembly has immediately passed laws forbidding childbirth without government approval.

It is proposed that all schools cancel new building ventures and terminate the hiring of new teachers as they prepare to switch entirely into animal education and adult unlearning and reeducation. Since the growth of remaining children can also be halted at any given ages, it is proposed that their maturing be maximally delayed especially in the very early years. This will facilitate maximum growth, but more importantly, it will allow for the continuous presence of children in a society in which few can ever again be born.

Since most adults can never have children any more, it is proposed that the government establish children as public property for all who desire to have equal rights in observing, loving, and caring for them, and that the schools be centers for providing and monitoring this public service. The schools will also be centers for the dispensing of immortality drugs and antidotes to the brooding and maternal instincts.

It is proposed that new existential learning experiences be introduced on "The Right to be Born and to Die," "Human Evolution and Destiny," and "As Man Becomes a God."

APPENDIX B

STUDENT ASSIGNMENTS

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ASSIGNMENT #1

Preparations for Planning Period 1975-1984

You are about to play the game *SAFE*--a simulation of the future of public education. You will be an important community leader who is assigned to a committee responsible for planning the future of a large metropolitan school district.

The goal of your committee is to earn as many satisfaction points as possible. The team with the most points at the end of the fifth ten-year planning period is declared the winner.

Your first assignment is to read the Game Manual carefully. Therein you will find a detailed description of all preparations needed for the game and all the edvents. Know what is meant by such terms as edvents, educational evaluators, socievents, edsurance, and edvertising, and understand how they are used in the game.

Read the first 20 edvents carefully, then complete the table below and prepare to hand it in. Base your decisions on the following considerations: a) the degree to which the seven educational evaluators will like them (remember, if the powerful sociopolitical groups don't like an edvent, then it is not likely to win many satisfaction points for you), b) the degree to which the long-range effects are desirable, and c) the cost of the edvent.

Edvent Selections

1. From the first 12 edvents, write the "best" 2 here:	1. 2.
2. From the first 14 edvents, minus the 2 above, write the "best" 2 here:	1. 2.
3. From the first 16 edvents, minus the 4 above, write the "best" 2 here:	1. 2.
4. From the first 18 edvents, minus the 6 above, write the "best" 2 here:	1. 2.
5. From the first 20 edvents, minus the 8 above, write the "best" 2 here:	1. 2.

ASSIGNMENT #2

Preparations for Planning Period 1985-1994

During this second round of the game *SAFE*, your district planning committee will be living through the years 1985 to 1994 A.D. You will be primarily concerned with edvents #11 through 30. Your assignment is to read these edvents carefully and then to use the following two pages to prepare a public relations analysis. This analysis will indicate which of the edvent options for the period will earn you the most points.

In the left-hand column of the form are listed the 20 edvents, #11 through 30 by number and name. At the top of the page a space is provided for you to fill in the new influence levels of each of the educational evaluators as given in the printout from Round I. You are to estimate on the first row for each of the 20 edvents how satisfied you feel each of the evaluators is likely to be with that edvent.

For example, the first edvent on the form is #11, Interactional CATV Schools. All of the evaluators like this edvent except for the Essentialists. (The rating scale is from +3 to -3 where -3 means they intensely dislike it and +3 means they intensely like it.) The second edvent for the perios is #12, Individualized Learning Schools. In this case, the Essentialists and the Neoperennialists dislike it. You are to now estimate how the evaluators will view each of the remaining 18 edvents for the period. To help you with this, some of the information is already provided.

After these ratings are completed, multiply the influence level at the top of the page by each of the influence levels you just finished estimating and fill the products in the second row provided for each edvent. The sum of the products is put to the right in the "Totals" column. Each total tells you how many points you might earn if that edvent is implemented.

For example, suppose the computer printout from Round I gave the following new influence levels: NEO 85, ESS 300, SOC 315, EXP 110, REC 130, HUM 40, and BIO 10. You would fill in these values on the top line of the form on the next page and calculate the points possible through implementing this edvent as follows:

EDVENT	EDUCATIONAL EVALUATORS							
	NEO	ESS	SOC	EXP	REC	HUM	BIO	TOTAL
New Influence Levels →	85	300	315	110	130	40	10	
#11 Interactional CATV Schools	+1	-1	+1	+2	+2	+1	+1	630
	+85	-300	+315	+220	+260	+40	+10	

The only remaining problem is to specifically determine which edvents you want to implement. During the first two years, your options are #2 through 22, minus of course those edvents which you implemented in Round I. Write at the bottom of your public relations analysis form the two edvents with the highest totals from the 20.

For the second two-year period, your options are #4 through 24. Pick the highest two remaining and add them to your list. Do the same for each of the remaining two-year periods until you have picked the ten "best" edvents from among the options. This analysis will tell you which are the "best" choices for immediate public satisfaction and the order in which you should implement them.

PUBLIC RELATIONS ANALYSIS

Years:	EDVENT	EDUCATIONAL EVALUATORS: Neoperennialists (NEO)	Essentialists (ESS)	Social Realists (SOC)	Experimentalists (EXP)	Social Reconstructionists (REC)	Human Potentialists (HUM)	Biological Reconstructionists (BIO)	TOTAL
	New Influence Levels →								
1985-1986	#11. Interactional CATV Schools	+1	-1	+1	+2	+2	+1	+1	
	#12. Individualized Learning Schools	-1	-1	+1	+2	+1	+2	+1	
	#13. Education as an Occupation				-1	-1	-1		
	#14. Society Schooling	-2		+1					
	#15. Community Arts Center	+1	-1		+2				
	#16. Family Health Center			-1			+2		
	#17. Educational Research Institute	-2	-1				-1		
	#18. Student Information Service	-3		+2				+3	
	#19. Youth Towns	-3			+3				
	#20. Education Assembly	+1		-2				+2	

(continued on next page)

PUBLIC RELATIONS ANALYSIS (continued)

	EDVENT	EDUCATIONAL EVALUATORS							
		Neoperennialists (NEO)	Essentialists (ESS)	Social Realists (SOC)	Experimentalists (EXP)	Social Reconstructionists (REC)	Human Potentialists (HUM)	Biological Reconstructionists (BIO)	TOTAL
Years: 1985-1986 (con'd)	#21. National Library Service			-1	+2				
	#22. Educational Experience Centers		-2		+3				
1987-1988	#23. Performance Contracting			-2			-2		
	#24. Community Siblings Program		-2			+2			
1989-1990	#25. Future-Shock Curricula	-3				+3			
	#26. Differential Staffing		+2	-1					
1991-1992	#27. Parochiaid	+3			-2		-1		
	#28. Marriage Training Schools		-1	+1					
1993-1994	#29. Intelligence Drugs			-1		+3			
	#30. Personality Drugs		+1	+1				+3	

ASSIGNMENT #3, Part I

Preparations for Planning Period 1995-2004

During this third round of the game *SAFE*, your district planning committee will be living through the years 1995 to 2004 A.D. You will be primarily concerned with edvents #21 through 40. Your assignment is to prepare a public relations analysis and a futurist analysis. Together, this information will tell you which of the edvent options are the most desirable. To make this assignment as meaningful and yet as simple as possible, one-half of your team will take edvents #21 to 30 (Part I), and the other half will take edvents #31 to 40 (Part II).

Public Relations Analysis: On the following page you will find a form containing edvents #21 to 30 in the left-hand column and the seven educational evaluators across the top. This is very similar to the analysis you made in preparation for Round II. Again, there is provided about half of the information you will need to perform the analysis. This information tells you the degree to which the evaluators like or dislike the particular edvent (on a scale from +3 to -3). Your assignment is to complete this information by filling in the blanks. Then compute the satisfaction points possible for each edvent.

To perform this computation, fill in across the top the new influence levels as taken from the printout of Round II. Multiply the influence level of each group by the satisfaction or dissatisfaction level that the group feels toward the particular edvent and put the product in the space directly below. Add these products and put the sum to the right in the "Total" column.

Futurist Analysis: On the third page you will find a form containing edvents #21 to 30 in the left-hand column and the 12 socievents across the top. This is the futurist analysis form. Half of the information you will need is already provided. To the right of edvents #21 to 25 there is a series of numbers from +6 to -6. These numbers tell you how the implementation of that edvent will change the probability of occurrence of each of the socievents.

For example, if you implement National Library Service, the probability of nuclear war goes down by one point; and if you implement Performance Contracting, it goes up one point. Your assignment is to fill in the missing information by reading the edvents and then estimating on a scale from +6 to -6 the degree to which you feel each edvent will change the probability of occurrence of each socievent. Then compute the totals in the last four columns. To get the total "desirable effects," change the signs of the last eight socievents and then add the positive numbers of all 12 socievents together. To get the total "undesirable effects," add all the negative numbers together (see the examples on the form). In the "special concerns" column, put the opposite effect of one socievent which you are particularly concerned about (such as nuclear war) and then total these three columns to the right.

The public relations analysis will tell you which edvent will earn the most immediate points. The futurist analysis will tell you which edvent will lead to the most desirable future for the district. Together, they suggest the "best" choices for implementation. To complete your preparations, choose what you now consider to be the five best edvents you will recommend for implementation.

PUBLIC RELATIONS ANALYSIS

EDVENT	EDUCATIONAL EVALUATORS							
	Neoperennialists (NEO)	Essentialists (ESS)	Social Realists (SOC)	Experimentalists (EXP)	Social Reconstructionists (REC)	Human Potentialists (HUM)	Biological Reconstructionists (BIO)	T O T A L
New Influence Levels →								
#21. National Library Service	+1		-1				+1	
#22. Educational Experience Centers	-3	-2	+1					
#23. Performance Contracting			-2		+2	-2		
#24. Community Siblings Program	-3		+1	+1				
#25. Future Shock Curricula	-3					+1	+2	
#26. Differential Staffing		+2		+1	+2			
#27. Parochiaid	+3		-1		-2			
#28. Marriage Training Schools		-1		+2		+2		
#29. Intelligence Drugs			-1		+3	-1		
#30. Personality Drugs		+1			+2		+3	

FUTURIST ANALYSIS

EVENTS	SOCIEVENTS																	
	1. GNP Growth (GNP)	2. Greater Efficiency (GRE)	3. Community Involvement (COM)	4. National Involvement (NAT)			5. Conservative Reaction (CON)	6. Parent Protests (PAR)	7. Teacher Strikes (TEA)	8. Student Riots (STU)	9. Private School Closure (PRI)	10. Accidents (ACC)	11. Redirection of Resources (RED)	12. Nuclear War (NUC)	Desirable Effects	Undesirable Effects	Special Concerns Nuclear War	TOTAL OF THE LAST THREE COLUMNS
#21. National Library Service	+1	+3	+2	+4			0	+3	-2	-2	-2	0	0	-1	+17	-3	+1	+15
#22. Educational Experience Centers	-1	-3	+2	+2			+6	+4	+4	-4	-2	+4	-2	-1	+13	-22	+1	-8
#23. Performance Contracting	0	+4	-2	+2			-2	+4	0	0	-2	0	-2	+1	+12	-7	-1	+4
#24. Community Siblings Program	0	+3	+1	0			0	+1	+3	-2	0	0	0	0	+6	-4	0	+2
#25. Future Shock Curricula	+1	+2	+1	+4			+4	0	+2	-2	+2	+3	-2	-2	+14	-11	+2	+5
#26. Differential Staffing																		
#27. Parochiaid																		
#28. Marriage Training Schools																		
#29. Intelligence Drugs																		
#30. Personality Drugs																		

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ASSIGNMENT #3, Part II

Preparations for Planning Period 1995-2004

During this third round of the game *SAFE*, your district planning committee will be living through the years 1995 to 2004 A.D. You will be concerned with edvents #21 through 40. Your assignment is to prepare a public relations analysis and a futurist analysis. Together, this information will tell you which of the edvent options are the most desirable. To make this assignment as meaningful and yet as simple as possible, one-half of your team will take edvents #21 to 30 (Part I), and the other half will take edvents #31 to 40 (Part II).

Public Relations Analysis: On the following page you will find a form containing edvents #31 to 40 in the left-hand column and the seven educational evaluators across the top. This is very similar to the analysis you made in preparation for Round II. Again, there is provided about half of the information you will need to perform the analysis. This information tells you the degree to which the evaluators like or dislike the particular edvent (on a scale from +3 to -3). Your assignment is to complete this information by filling in the blanks. Then compute the satisfaction points possible for each edvent.

To perform this computation, fill in across the top the new influence levels as taken from the printout of Round II. Multiply the influence level of each group by the satisfaction or dissatisfaction level that the group feels toward the particular edvent and put the product in the space directly below. Add these products and put the sum to the right in the "Total" column.

Futurist Analysis: On the third page you will find a form containing edvents #21 to 30 in the left-hand column and the 12 socievents across the top. This is the futurist analysis form. Half of the information you will need is already provided. To the right of edvents #31 to 40 there is a series of numbers from +6 to -6. These numbers tell you how the implementation of that edvent will change the probability of occurrence of each of the socievents.

For example, if you implement Family-Centered Education, the probability of nuclear war goes up two points and if you implement Education Quotas it goes down one point. Your assignment is to fill in the missing information by reading the edvents and then estimating on a scale from +6 to -6 the degree to which you feel each edvent will change the probability of occurrence of each socievent. Then compute the totals in the last four columns. To get the total "desirable effects," change the signs of the last eight socievents and then add the positive numbers of all 12 socievents together. To get the total "undesirable effects," add all the negative numbers together (see the examples on the form). In the "special concerns" column, put the opposite effect of one socievent which you are particularly concerned about (such as nuclear war) and then total these three columns to the right.

The public relations analysis will tell you which edvent will earn the most immediate points. The futurist analysis will tell you which edvent will lead to the most desirable future for the district. Together, they suggest the "best" choices for implementation. To complete your preparations, choose what you now consider to be the five best edvents you will recommend for implementation.

PUBLIC RELATIONS ANALYSIS

EDVENT	EDUCATIONAL EVALUATORS							
	Neoperennialists (NEO)	Essentialists (ESS)	Social Realists (SOC)	Experimentalists (EXP)	Social Reconstructionists (REC)	Human Potentialists (HUM)	Biological Reconstructionists (BIO)	T O T A L
New Influence Levels →								
#31. Family-Centered Education	+3		-2			+1		
#32. Incidental Education	+1				-2	+3		
#33. Professional Parenthood School		-1	+1				+2	
#34. Schools of Relearning			+2			-3	+3	
#35. Education Quotas		-1		+2	+3			
#36. Computerized Schools	+3				-2	+2		
#37. Advanced Sex Education	-3	-1	+1					
#38. Education for World Democracy	-2		+1		+3			
#39. Charter Myth Schools			-1	-3			+2	
#40. Education Centralization	-2			+1	+2			

FUTURIST ANALYSIS

EDVENTS	SOCIEVENTS																	
	1. GNP Growth (GNP)	2. Greater Efficiency (GRE)	3. Community Involvement (COM)	4. National Involvement (NAT)			5. Conservative Reaction (CON)	6. Parent Protests (PAR)	7. Teacher Strikes (TEA)	8. Student Riots (STU)	9. Private School Closure (PRI)	10. Accidents (ACC)	11. Redirection of Resources (RED)	12. Nuclear War (NUC)	Desirable Effects	Undesirable Effects	Special Concerns Nuclear War	TOTAL OF THE LAST THREE COLUMNS
#31. Family-Centered Education	-1	-6	-4	-2			+3	+6	+2	0	-4	0	+4	+2	+4	-30	-2	-23
#32. Incidental Education	-2	-6	-4	+1			+6	+6	+4	-4	-4	+4	+4	+1	+9	-37	-1	-29
#33. Professional Parenthood Schools	0	0	+2	+2			-2	+1	0	0	-2	0	-4	0	+12	-1	0	+11
#34. Schools of Relearning	+2	+3	+2	+2			-4	-4	+2	+6	-4	+4	-2	0	+23	-12	0	+11
#35. Education Quotas	0	0	0	+1			+2	+2	+4	+4	-4	0	-2	-1	+8	-12	+1	-3
#36. Computerized Schools																		
#37. Advanced Sex Education																		
#38. Education for World Democracy																		
#39. Charter Myth Schools																		
#40. Education Centralization																		

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ASSIGNMENT #4, Part I

Preparations for Planning Period 2005-2015

During this fourth round of the game *SAFE*, your district planning committee will be living through the years 2005 to 2015 A.D. You will be concerned with edvents #31 through 50. Your assignment is to prepare a public relations analysis, a futurist analysis, and a cost-benefit analysis. Together, this information will tell you which of the edvent options are the most desirable. To make this assignment as meaningful and yet as simple as possible, one-half of your team will take edvents #31 through 40 (Part I) and the other half will take edvents #41 through 50 (Part II).

Public Relations Analysis: On the following page you will find a form containing edvents #31 to 40 in the left-hand column and the seven educational evaluators across the top. This is very similar to the analysis you made in preparations for Round III. Again there is provided about half of the information you will need to perform the analysis. This information tells you the degree to which the evaluators like or dislike the particular edvent (on a scale from +3 to -3). Your assignment is to complete this information by filling in the blanks. Then compute the satisfaction points each edvent makes possible.

Futurist Analysis: On the next page you will find a form containing edvents #31 to 40 in the left-hand column and the 12 socievents across the top. This is the futurist analysis form and again, half of the information you will need is already provided. To the right of edvents #31 to 35 there is a series of numbers from +6 to -6. These numbers tell you how the implementation of that edvent will change the probability of occurrence of each of the above socievents. For example, if you implement Family-Centered Education, the probability of nuclear war goes up by two points and if you implement Education Quotas, it goes down by one point. Your assignment is to fill in the missing information by reading the edvents and then computing the totals in the last four columns. To get the total "desirable effects," change the signs in the last eight socievents and then add all the positive ones together. To get the total "undesirable effects," add all the negative ones together. In the special concerns column, put the opposite effect of one socievent which you are particularly concerned about (such as nuclear war) and then total these three columns to the right.

Cost-Benefit Analysis: Take a separate sheet of paper and divide the satisfaction points which each edvent makes possible by the cost of that edvent. Rank the quotients from the highest to the lowest. For example, suppose Family-Centered Education could earn you 600 points and cost ⱿD 10 million. And suppose Incidental Education could earn you 500 points and costs ⱿD 6 million. For the cost-benefit analysis, you divide the benefits by the costs. This gives you 600/10 or 60 for Family-Centered Education and 500/6 or 83 for Incidental Education. Obviously, though Incidental Education could earn you fewer points, it is a much better buy for the money invested and should be preferred.

To complete your assignment, choose from the cost-benefit and futurist conclusions the five "best" edvents you will recommend for implementation.

PUBLIC RELATIONS ANALYSIS

EDVENT	EDUCATIONAL EVALUATORS							
	Neoperennialists (NEO)	Essentialists (ESS)	Social Realists (SOC)	Experimentalists (EXP)	Social Reconstructionists (REC)	Human Potentialists (HUM)	Biological Reconstructionists (BIO)	T O T A L
New Influence Levels →								
#31. Family-Centered Education	+3		-2			+1		
#32. Incidental Education	+1				-2	+3		
#33. Professional Parenthood School		-1	+1				+2	
#34. Schools of Relearning			+2			-3	+3	
#35. Education Quotas		-1		+2	+3			
#36. Computerized Schools	+3				-2	+2		
#37. Advanced Sex Education	-3	-1	+1					
#38. Education for World Democracy	-2		+1		+3			
#39. Charter Myth Schools			-1	-3			+2	
#40. Education Centralization	-2			+1	+2			

FUTURIST ANALYSIS

EDVENTS	SOCIEVENTS																	
	1. GNP Growth (GNP)	2. Greater Efficiency (GRE)	3. Community Involvement (COM)	4. National Involvement (NAT)			5. Conservative Reaction (CON)	6. Parent Protests (PAR)	7. Teacher Strikes (TEA)	8. Student Riots (STU)	9. Private School Closure (PRI)	10. Accidents (ACC)	11. Redirection of Resources (RED)	12. Nuclear War (NUC)	Desirable Effects	Undesirable Effects	Special Concerns Nuclear War	TOTAL OF THE LAST THREE COLUMNS
#31. Family-Centered Education	-1	-6	-4	-2			+3	+6	+2	0	-4	0	+4	+2	+4	-30	-2	-28
#32. Incidental Education	-2	-6	-4	+1			+6	+6	+4	-4	-4	+4	+4	+1	+9	-37	-1	-29
#33. Professional Parenthood Schools	0	0	+2	+2			-2	+1	0	0	-2	0	-4	0	+12	-1	0	+11
#34. Schools of Relearning	+2	+3	+2	+2			-4	-4	+2	+6	-4	+4	-2	0	+23	-12	0	+11
#35. Education Quotas	0	0	0	+1			+2	+2	+4	+4	-4	0	-2	-1	+8	-12	+1	-3
#36. Computerized Schools																		
#37. Advanced Sex Education																		
#38. Education for World Democracy																		
#39. Charter Myth Schools																		
#40. Education Centralization																		

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ASSIGNMENT #4, Part II

Preparations for Planning Period 2005-2015

During this fourth round of the game *SAFE*, your district planning committee will be living through the years 2005 to 2015 A.D. You will be concerned with edvents #31 through 50. Your assignment is to prepare a public relations analysis, a futurist analysis, and a cost-benefit analysis. Together, this information will tell you which of the edvent options are the most desirable. To make this assignment as meaningful and yet as simple as possible, one-half of your team will take edvents #31 through 40 (Part I) and the other half will take edvents #41 through 50 (Part II).

Public Relations Analysis: On the following page you will find a form containing edvents #41 through 50 in the left-hand column and the seven educational evaluators across the top. This is very similar to the analysis you made in preparations for Round III. Again there is provided about half of the information you will need to perform the analysis. This information tells you the degree to which the evaluators like or dislike the particular edvent (on a scale from +3 to -3). Your assignment is to complete this information by filling in the blanks. Then compute the satisfaction points each edvent makes possible.

Futurist Analysis: On the next page you will find a form containing edvents #41 to 50 in the left-hand column and the 12 socievents across the top. This is the futurist analysis form and again, half of the information you will need is already provided. To the right of edvents #41 to 45 5here is a series of numbers from +6 to -6. These numbers tell you how the implementation of that edvent will change the probability of occurrence of each of the above socievents. For example, if you implement Supersleep Education, the probability of nuclear war goes down by two points and if you implement World Government Education, it goes down by six points. Your assignment is to fill in the missing information by reading the edvents and then computing the totals in the last four columns. To get the total "desirable effects," change the signs in the last eight socievents and then add all the positive ones together. To get the total "undesirable effects," add all the negative ones together. In the special concerns column, put the opposite effect of one socievent which you are particularly concerned about (such as nuclear war) and then total these three columns to the right.

Cost-Benefit Analysis: Take a separate sheet of paper and divide the satisfaction points which each edvent makes possible by the cost of that edvent. Rank the quotients from the highest to the lowest. For example, suppose Education for Space Travel could earn you 600 points and cost ₰D 10 million. And suppose World Government Education could earn you 500 points and cost ₰D 6 million. For the cost-benefit analysis, you divide the benefits by the costs. This gives you 600/10 or 60 for Education for Space Travel and 500/6 or 83 for World Government Education. Obviously, though World Government Education could earn you fewer points, it is a much better buy for the money invested and should be preferred.

To complete your assignment, choose from the cost-benefit and futurist conclusions the five "best" edvents you will recommend for implementation.

PUBLIC RELATIONS ANALYSIS

EDVENT	EDUCATIONAL EVALUATORS							
	Neoperennialists (NEO)	Essentialists (ESS)	Social Realists (SOC)	Experimentalists (EXP)	Social Reconstructionists (REC)	Human Potentialists (HUM)	Biological Reconstructionists (BIO)	T O T A L
New Influence Levels →								
#41. Education for Space Travel	-2			+2	-1			
#42. World Government Education	-1					+1	-1	
#43. World Language Education		-1	+1		+3			
#44. Community Happiness Centers			-1		+1		+1	
#45. Supersleep Education	-2			+1	+2			
#46. Genetic Engineering Education		-1	+1	+1				
#47. Intelligent Robot Tutors			-2	+2		-1		
#48. Babytorium Education		-1			+2	-1		
#49. Educating the Clones			-1	-2			+3	
#50. School Superfood	-2	+1				-1		

FUTURIST ANALYSIS

EDVENTS	SOCIEVENTS																	
	1. GNP Growth (GNP)	2. Greater Efficiency (GRE)	3. Community Involvement (COM)	4. National Involvement (NAT)			5. Conservative Reaction (CON)	6. Parent Protests (PAR)	7. Teacher Strikes (TEA)	8. Student Riots (STU)	9. Private School Closure (PRI)	10. Accidents (ACC)	11. Redirection of Resources (RED)	12. Nuclear War (NUC)	Desirable Effects	Undesirable Effects	Special Concerns Nuclear War	TOTAL OF THE LAST THREE COLUMNS
#41. Education for Space Travel	0	0	+2	+4			-2	0	0	-4	+4	+6	-2	0	+14	-10	0	+4
#42. World Government Education	0	0	-4	+4			+2	+2	+2	-2	-2	0	+2	-6	+14	-12	+6	+8
#43. World Language Education	0	+2	-2	+2			0	+4	+4	+4	-4	0	-2	-4	+14	-14	+4	+4
#44. Community Happiness Centers	+1	+2	+3	+2			+4	0	-2	0	+2	0	-2	-1	+13	-6	+1	+8
#45. Supersleep Education	+4	0	+4	+2			-2	0	0	0	+1	0	-2	+2	+14	-3	-2	+9
#46. Genetic Engineering Education																		
#47. Intelligent Robot Tutors																		
#48. Babytorium Education																		
#49. Educating the Clones																		
#50. School Superfood																		

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ASSIGNMENT #5, Part I

Preparations for Planning Period 2005-2024

During this last round of the game *SAFE*, your district planning committee will be living through the years 2015 to 2024 A.D. You will be concerned with edvents #41 through 60. Your assignment is to prepare a public relations analysis, a futurist analysis, and a cost-benefit analysis, only this time they will all be integrated together.

The final analysis will tell you which of the edvent options are the most "desirable." To make this assignment as meaningful and yet as simple as possible, one-half of your team will take edvents #41 through 50 (Part I), and the other half will take edvents #51 through 60 (Part II).

Public Relations Analysis: On the following page you will find a form containing edvents #41 through 50 in the left-hand column and the seven educational evaluators across the top. This is very similar to the analysis you made in preparation for Round IV. Only this round all of the positive relationships are given. This information tells you the degree to which the evaluators favor the particular edvent (on a scale from 0 to +3). Your assignment is to complete this information by filling in the blanks for the negative effects. Then compute the satisfaction points each edvent makes possible, as done in Assignment #4.

Futurist Analysis: On the next page you will find a form containing edvents #41 through 50 in the left-hand column and the 12 socievents across the top. This is the Futurist Analysis form and again, half of the information you will need is already provided. Your assignment is to fill in the missing negative effects. Then compute the totals in the last four columns.

Cost-Benefit Analysis: Take a separate sheet of paper and divide the satisfaction points which each edvent makes possible by the cost of the edvent. Rank the quotients from the highest to the lowest and place the rankings in column A of the Cost-Benefit form. Divide the total Futurist Analysis points for each edvent by the cost of the edvent, rank the quotients from highest to the lowest, and place the rankings in column C. Multiply the rankings in column A by two and put the products in column B. Add columns B and C together and put the sum in column D. Now rank column D from the lowest to the highest and put the results in column E.

This is a cost-benefit analysis technique which integrates the long- and short-range effects of a decision with its overall cost so that you can tell which of the choices are the "best." The edvents in column E with the lowest numbers are theoretically the "best" choices.

PUBLIC RELATIONS ANALYSIS

EDVENT	EDUCATIONAL EVALUATORS							
	Neoperennialists (NEO)	Essentialists (ESS)	Social Realists (SOC)	Experimentalists (EXP)	Social Reconstructionists (REC)	Human Potentialists (HUM)	Biological Reconstructionists (BIO)	T O T A L
New Influence Levels →								
#41. Education for Space Travel		+1	+1	+2		+2	+2	
#42. World Government Education				+2	+3	+1		
#43. World Language Education			+1	+2	+3		+1	
#44. Community Happiness Centers	+2	+1			+1		+1	
#45. Supersleep Education			+2	+1	+2		+2	
#46. Genetic Engineering Education			+1	+1	+2		+3	
#47. Intelligent Robot Tutors	+1			+2	+2		+2	
#48. Babytorium Education			+1	+1	+2		+2	
#49. Educating the Clones		+1			+1		+3	
#50. School Superfood		+1	+1	+1	+2		+3	

FUTURIST ANALYSIS

EDVENTS	SOCIEVENTS																	
	1. GNP Growth (GNP)	2. Greater Efficiency (GRE)	3. Community Involvement (COM)	4. National Involvement (NAT)		5. Conservative Reaction (CON)	6. Parent Protests (PAR)	7. Teacher Strikes (TEA)	8. Student Riots (STU)	9. Private School Closure (PRI)	10. Accidents (ACC)	11. Redirection of Resources (RED)	12. Nuclear War (NUC)	Desirable Effects	Undesirable Effects	Special Concerns Nuclear War	TOTAL OF THE LAST THREE COLUMNS
#41. Education for Space Travel	0	0	+2	+4		-2	0	0	+4	+4	+6	-2	0	+8	-10	0	-2
#42. World Government Education	0	0		+4		+2	+2	+2			0	+2					
#43. World Language Education	0	+2		+2		0	+4	+4	+4	0							
#44. Community Happiness Centers	+1	+2	+3	+2		+4	0		0	+2	0						
#45. Supersleep Education	+4	0	+4	+2			0	0	0	+1	0		+2				
#46. Genetic Engineering Education	+2		+1	+2							+1						
#47. Intelligent Robot Tutors	+2	+4	+2	+1			+4			+4	+4	+1	+1				
#48. Babytorium Education			+1	+1		+2											
#49. Educating the Clones	+2					+2	+2	+4	+6		+2		+1				
#50. School Superfood	+2	+3	+2	+2							+4						

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COST-BENEFIT ANALYSIS

EDVENT	A Public Relations Ranking	B Multiply Column A by 2	C Futurist Analysis Rankings	D Sum of Columns B and C	E Rank Column D from Lowest to Highest
#41. Education for Space Travel					
#42. World Government Education					
#43. World Language Education					
#44. Community Happiness Centers					
#45. Supersleep Education					
#46. Genetic Engineering Education					
#47. Intelligent Robot Tutors					
#48. Babytorium Education					
#49. Educating the Clones					
#50. School Superfood					

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ASSIGNMENT #5, Part II

Preparations for Planning Period 2005-2024

During this last round of the game *SAFE*, your district planning committee will be living through the years 2015 to 2024 A.D. You will be concerned with edvents #41 through 60. Your assignment is to prepare a public relations analysis, a futurist analysis, and a cost-benefit analysis, only this time they will all be integrated together.

The final analysis will tell you which of the edvent options are the most "desirable." To make this assignment as meaningful and yet as simple as possible, one-half of your team will take edvents #41 through 50 (Part I), and the other half will take edvents #51 through 60 (Part II).

Public Relations Analysis: On the following page you will find a form containing edvents #51 through 60 in the left-hand column and the seven educational evaluators across the top. This is very similar to the analysis you made in preparation for Round IV. Only this round all of the positive relationships are given. This information tells you the degree to which the evaluators favor the particular edvent (on a scale from 0 to +3). Your assignment is to complete this information by filling in the blanks for the negative effects. Then compute the satisfaction points each edvent makes possible, as done in Assignment #4.

Futurist Analysis: On the next page you will find a form containing edvents #51 through 60 in the left-hand column and the 12 socievents across the top. This is the Futurist Analysis form and again, half the information you will need is already provided. Your assignment is to fill in the missing negative effects. Then compute the totals in the last four columns.

Cost-Benefit Analysis: Take a separate sheet of paper and divide the satisfaction points which each edvent makes possible by the cost of the edvent. Rank the quotients from the highest to the lowest and place the rankings in column A of the Cost-Benefit form. Divide the total Futurist Analysis points for each edvent by the cost of the edvent, rank the quotients from highest to the lowest, and place the rankings in column C. Multiply the rankings in column A by two and put the products in column B. Add columns B and C together and put the sum in column D. Now rank column D from the lowest to the highest and put the results in column E.

This is a cost-benefit analysis technique which integrates the long- and short-range effects of a decision with its overall cost so that you can tell which of the choices are the "best." The edvents in column E with the lowest numbers are theoretically the "best" choices.

PUBLIC RELATIONS ANALYSIS

EDVENT	EDUCATIONAL EVALUATORS							
	Neoperennialists (NEO)	Essentialists (ESS)	Social Realists (SOC)	Experimentalists (EXP)	Social Reconstructionists (REC)	Human Potentialists (HUM)	Biological Reconstructionists (BIO)	T O T A L
New Influence Levels →								
#51. Advanced Personality Drugs			+3		+2		+3	
#52. Schools for Participatory Democracy	+1		+2	+3	+2	+1	+1	
#53. Supercontrolled Environments			+2	+3	+2	+2	+2	
#54. Education for Suspended Animation			+1	+2		+2	+1	
#55. Instantaneous Education				+1	+2	+1	+3	
#56. Mental Telepathy Education				+2	+2	+3	+2	
#57. Education Orgasms			+2		+2		+3	
#58. Automated Childhood			+1		+2		+3	
#59. World Reconstructionist Education			+1	+2	+3		+1	
#60. Education for Immortality		+1			+1		+3	

FUTURIST ANALYSIS

EDVENTS	SOCIEVENTS																			
	1. GNP Growth (GNP)	2. Greater Efficiency (GRE)	3. Community Involvement (COM)	4. National Involvement (NAT)				5. Conservative Reaction (CON)	6. Parent Protests (PAR)	7. Teacher Strikes (TEA)	8. Student Riots (STU)	9. Private School Closure (PRI)	10. Accidents (ACC)	11. Redirection of Resources (RED)	12. Nuclear War (NUC)	Desirable Effects	Undesirable Effects	Special Concerns Nuclear War	TOTAL OF THE LAST THREE COLUMNS
#51. Advanced Personality Drugs	+2	+6	+1					+2		+2	+4		+6	+2	+1				
#52. School for Participatory Democracy			+2	+1								+2							
#53. Supercontrolled Environments		+1	+2	+2					+2			+4	+4						
#54. Education for Suspended Animation			+2	+1				+1	+2			+2	+6						
#55. Instantaneous Education	+4	+6							+6			+2	+6	+6					
#56. Mental Telepathy Education	+1	+2						+2	+2				+2						
#57. Education Orgasms	+1	+4						+4		+1		+4	+4	+6					
#58. Automated Childhood	+2	+6						+1		+6	+6		+6	+2	+1				
#59. World Reconstructionist Education	+1			+4				+2		+2									
#60. Education for Immortality	+2							+2	+6	+4		+6	+6	+6	+6				

COST-BENEFIT ANALYSIS

EDVENT	A Public Relations Ranking	B Multiply Column A by 2	C Futurist Analysis Rankings	D Sum of Columns B and C	E Rank Column D from Lowest to Highest
#51. Advanced Personality Drugs					
#52. Schools for Participatory Democracy					
#53. Supercontrolled Environments					
#54. Education for Suspended Animation					
#55. Instantaneous Education					
#56. Mental Telepathy Education					
#57. Education Orgasms					
#58. Automated Childhood					
#59. World Reconstructionist Education					
#60. Education for Immortality					

APPENDIX C

SAMPLE RUN OF THE GAME

INTRODUCTION

Explanation

YOU ARE ABOUT TO PLAY THE GAME "SAFE"--A SIMULATION OF THE FUTURE OF EDUCATION FROM 1975 TO 2024 A.D. YOU REPRESENT DISTRICT 1 AND ARE NOW RESPONSIBLE FOR EDUCATIONAL DECISIONS FROM 1975 TO 1984.

One of four possible general trends.

BEGINNING: 1ST TEN-YEAR PLANNING PERIOD
GENERAL SOCIETAL AND INTERNATIONAL DEVELOPMENTS OVER THIS DECADE WILL STRENGTHEN INFLUENCE GROUPS IN YOUR DISTRICT FAVORING MODERATE CONSERVATISM.

YOU ARE NOW LIVING IN THE YEAR 1975. YOUR EDVENT OPTIONS ARE:

This list may contain as many as 20 options.

1 CAREER EDUCATION
2 VOUCHERS
3 ACCOUNTABILITY
4 AUTHORITARIAN SCHOOLS
5 FAMILY NEIGHBORHOOD LEARNING CENTERS
6 COMMUNITY NURSERY CENTERS
7 TELEVISED HOME STUDY PROGRAM
8 EDUCATION AS VOCATIONAL TRAINING
9 COMMUNITY GUIDENCE AND EVALUATION CENTERS
10 EXPERIENTIAL LEARNING SCHOOLS
11 INTERACTIONAL CATV SCHOOLS
12 INDIVIDUALIZED LEARNING SCHOOLS

Taxes received every two years.

YOUR ACCOUNT HAS JUST BEEN CREDITED WITH SD 12 MILLION FROM TAX REVENUES. TOTAL DEPOSITS IN YOUR ACCOUNT NOW ARE SD 12 MILLION.*

WHICH EDVENT WOULD YOU LIKE TO IMPLEMENT THIS YEAR? IF NONE, TYPE 0.

---

* SD on the computer will mean $D (STATOSDOLLARS).

First Choice Computer Decision Analysis.

1

YOU MADE ONE OF THE BEST POSSIBLE CHOICES FOR GAINING IMMEDIATE PUBLIC SATISFACTION.
CAUTION: YOU DID NOT MAKE ONE OF THE BEST LONG-RANGE DECISIONS WHEN CONSIDERING SOCIEVENTS. ANALYSIS RANKS IT 6.
A COST-BENEFIT ANALYSIS SUGGESTS THAT YOU MADE AN EXCELLENT OVERALL DECISION.

It may also fail.

YOUR INNOVATION IS SUCCESSFULLY IMPLEMENTED.
YOU HAVE REMAINING IN YOUR ACCOUNT SD 1 MILLION.
IS THERE ANOTHER EDVENT YOU WOULD LIKE TO IMPLEMENT DURING THIS TWO-YEAR PLANNING PERIOD?

13

A mistake; not available until next two-year period.

YOU MAY CHOOSE EACH EDVENT ONLY ONCE AND IT MUST BE ONE OF THE OPTIONS STATED ABOVE.
IS THERE ANOTHER EDVENT YOU WOULD LIKE TO IMPLEMENT DURING THIS TWO-YEAR PLANNING PERIOD?

3

Third choice

YOU MADE A GOOD, BUT NOT ONE OF THE BEST CHOICES FOR GAINING IMMEDIATE PUBLIC SATISFACTION. ANALYSIS RANKS IT 6.
CAUTION: YOU DID NOT MAKE ONE OF THE BEST LONG-RANGE DECISIONS WHEN CONSIDERING SOCIEVENTS. ANALYSIS RANKS IT 7.

Computer Decision Analysis.

YOU HAVE MADE A REASONABLE COST-BENEFIT CHOICE, BUT OTHERS WERE BETTER. ANALYSIS RANKS IT 6.

UNFORTUNATELY, YOUR INNOVATION IS A FAILURE, HALF OF ITS SATISFACTION POINTS ARE LOST.
YOUR DISTRICT IS NOW IN DEBT SD 6.5 MILLION.
IS THERE ANOTHER EDVENT YOU WOULD LIKE TO IMPLEMENT DURING THIS TWO-YEAR PLANNING PERIOD?

The "1" following your choice will give you a printout

10 1

UNFORTUNATELY, YOU WILL LIKELY LOSE POINTS BY THE IMPLEMENTATION OF THIS EDVENT. ANALYSIS RANKS IT 10.
CAUTION: YOU DID NOT MAKE ONE OF THE BEST LONG-RANGE DECISIONS WHEN CONSIDERING SOCIEVENT. ANALYSIS RANKS IT 8.
YOU HAVE MADE A REASONABLE COST-BENEFIT CHOICE, BUT OTHERS WERE BETTER. ANALYSIS RANKS IT 10.

130

of all variables that change as a result. They are in order as listed in the manual.

YOUR INNOVATION IS SUCCESSFULLY IMPLEMENTED.
INFLUENCE CHANGES: 1 -1 -2 -1 3 3 2 TOTALS: 79 321 254 108 122 101 21
SOCIEVENT CHANGES: -1 -3 2 0 4 2 2 -4 0 2 0 -2 TOTALS 665 90 221 254
64 93 114 121 123 57 65 19
YOUR DISTRICT IS NOW IN DEBT SD 15.2739 MILLION.
IS THERE ANOTHER EDVENT YOU WOULD LIKE TO IMPLEMENT DURING THIS TWO-YEAR PLANNING PERIOD?

"No"

0

You must put a 1 or 0 under each of them.

INDICATE BELOW HOW YOU WANT TO EDSURE TO CHANGE SOCIEVENT PROBABILITY LEVELS:
CON PAR TEA STU PRI ACC RED
1 0 1 1 1 0 0
DURING 1975 AND 1976 THE FOLLOWING SOCIEVENTS OCCURRED:
1 NATIONAL GNP GROWTH EARNS YOUR DISTRICT SD 2,225,000.
7 TEACHER STRIKES COST YOUR DISTRICT SD 4,500,000.

THE FOLLOWING SOCIEVENTS WOULD HAVE OCCURRED IF YOU HAD NOT IMPLEMENTED EDSURANCE PROGRAMS:
8 STUDENT RIOTS COST YOUR DISTRICT SD 4,250,000.

"12" under BIO is a mistake; you must put a number between 1 and 10 under each.

INDICATE BELOW HOW YOU WANT TO EDVERTISE TO CHANGE INFLUENCE AND SATISFACTION LEVELS:
NEO ESS SOC EXP REC HUM BIO
5 2 2 2 1 0 12

YOU MAY NOT CHANGE ANY PERCEPTIONS BY LESS THAN 0 NOR MORE THAN 10 POINTS.

INDICATE BELOW HOW YOU WANT TO EDVERTISE TO CHANGE INFLUENCE AND SATISFACTION LEVELS:
NEO ESS SOC EXP REC HUM BIO

A single "1" means one under each of them.

1
EDVERTISING COST YOU SD 2.002 MILLION DURING THIS TWO-YEAR PERIOD. FOR THIS YOU EARNED AN ADDITIONAL 100.0 SATISFACTION POINTS AND INCREASED INFLUENCE LEVELS BY 0 POINTS.

This compares your choice to the edvent options.

IN COMPARISON TO EDVERTISING FOR EARNING POINTS, YOUR EDVERTISING IS RANKED 4.

YOU HAVE BEEN CHARGED SD 606,596 INTEREST FOR OVERDRAWING YOUR ACCOUNT.

THIS TWO-YEAR PLANNING PERIOD HAS NOW ENDED. YOU EARNED 669 SATISFACTION POINTS.
TOTAL SATISFACTION POINTS EARNED SINCE 1975 ARE: 669.
YOUR DISTRICT HAS BECOME MORE CONSERVATIVE.

These went up because of bad choices.

NOTE: THE PROBABILITY OF UNDESIRABLE SOCIEVENTS OCCURRING HAS GONE UP BY 30 POINTS.
NOTE: THE PROBABILITY OF EDVENT FAILURE HAS GONE UP BY 18 POINTS.

* * * \

	NEW	OLD	CHANGE
ACC	58	55	3
RED	95	65	30
NUC	30	20	10
ED/F	482	400	82

THE NEW EDSURANCE COSTS ARE AS FOLLOWS:

These change because of new socievent probability levels.

CON	295500
PAR	134750
TEA	362250
STU	326624
PRI	227500
ACC	145000
RED	296875

TOTAL COSTS NOW ARE SD 1.6785 MILLION.
When positive, it means an increase. THIS IS A CHANGE OF SD 229125.

TOTAL SATISFACTION POINTS PER MILLION SD INVESTMENT NOW EQUALS: 33.8267.

This line gives the cost of using the computer.

COST
THE COST OF RUNNING THIS ROUND OF THE GAME IS 2.81 DOLLARS.

APPENDIX D

GAME EVALUATION FORM

SAFE: GAME EVALUATION

Name: _____

We appreciate your participation in *SAFE*, the simulation game. So that we may improve the game as a result of your experience and knowledge, we ask you to complete this questionnaire.

1. Did you enjoy this simulation game? Yes ___ No ___

a) What was the most enjoyable part of it?

b) What was the least enjoyable part of it?

2. Was it a worthwhile educational experience in view of the time and effort you put into it? Yes ___ No ___

a) How much time did you spend altogether in preparation for the game?

_____ hours

3. What do you feel are the most important things you learned from participation in the game?

a)

b)

c)

4. This simulation game was designed to help participants become aware of and reach the following ten objectives. On the scales to the left, indicate with an 'O' the extent to which the game has succeeded in achieving these goals with you personally.

Not at All					Very Much	
0	1	2	3	4	5	a) Participants will learn a wide range of future educational alternatives which can be anticipated to some extent from generally foreseeable developments in American society as a whole.
0	1	2	3	4	5	b) Participants will learn new techniques and approaches now emerging to facilitate meaningful long-range planning.
0	1	2	3	4	5	c) Participants will learn a model for studying the interrelationships between schools and society and the consequent restraints on the powers of educational decision-makers.
0	1	2	3	4	5	d) Participants will develop an increased sensitivity to the values of various sociopolitical groups.
0	1	2	3	4	5	e) Participants will deliberately examine a variety of viewpoints on controversial issues about the future with the intention of establishing informed opinions about them.
0	1	2	3	4	5	f) Participants will demonstrate faith in the power of reason and in analytical methods to foresee and build a more viable future.
0	1	2	3	4	5	g) Participants will weigh alternative educational policies against the standards of long-range overall public welfare rather than short-term or special interest groups.
0	1	2	3	4	5	h) Participants will judg problems and issues in terms of situations, purposes, and consequences involved rather than in terms of fixed, dogmatic precepts or emotionally wishful thinking.
0	1	2	3	4	5	i) Participants will seek to integrate the future perspective into their personal philosophy of education.
0	1	2	3	4	5	j) Participants will show increased confidence in their own and their society's ability to deal with a rapidly changing world.

5. The following are ten major assumptions which this simulation game makes. Make a check to the left of those assumptions with which you essentially agree. In the column to the right state briefly what's wrong with these assumptions.

I Agree		Why I Disagree
	a. Social systems must be analyzed in terms of dynamic interrelationships in which the occurrence of any social events may or may not affect the probability of occurrence of numerous other events and the various power groups. Therefore the future of education is most meaningfully studied in terms of such an interplay of relationships.	
	b. There are many alternative futures for educational institutions, but the most probably future is determined by the values of powerful social groups whose own power levels constantly vary according to numerous social events and the success or nonsuccess of past decisions.	
	c. Certainty in educational and social decisions cannot be determined in most situations, but man can deal with his changing world through the establishment of probability ratings which vary according to human decision-making and chance natural happenings. In this way, statistical 'certainty' will be approachable some day through long-range planning.	
	d We are moving into a technological and biological revolution which will profoundly change society and educators will be forced to deal with many serious proposals for educational reform which can be only roughly imagined and often appear incredulous today, but which must be to some extent anticipated if human options are to be maximized.	

I Agree | Why I Disagree

e. Modern society will continue the long-term trend toward greater industrialization and social wealth, and public education will remain a powerful influence into the foreseeable future.

f. Educational planning should and can be extended beyond the immediate and reliance on intuition to include statistical analyses of long-term trends and futurist simulations of interrelationships and probabilities.

g. Questions of changing social values can be realistically dealt with in terms of the changing influence levels of identifiable sociopolitical groups and predicted as a result of generally foreseeable responses to options and chance natural happenings.

h. The large-scale implementation of various educational innovations can affect the probability of occurrence of many major social developments.

i. Educational leaders have essentially only three powerful approaches to modifying their environment: through the selection of educational innovations, special edsurance programs, and edvertising to change public evaluation of programs.

j. The main goal of educational planning should not be greater efficiency, the maximization of immediate public satisfaction, the avoidance of undesirable social events, or the promotion of the educators themselves through high salaries or powerful positions, rather, the main goal of educational planning should be the long-range maximization of public satisfaction.

I Agree | Why I Disagree

k. Are there other assumptions which you feel this game makes? How would you state it (them)? Do you agree or disagree?

6. Does *SAFE* make any important false assumptions about schools and society? If so, what are they?

7. What revisions would you propose for this simulation game? If possible, please be specific and try to provide your reasons for the proposed changes.

Thank you for your comments!

APPENDIX E

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Long-Range Future 142

Comprehensive Bibliography 142

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ITEM # 03

SAFE: GAME-DIRECTOR'S MANUAL

by

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University of Utah

Cultural Foundations of Education

June 1973

FOREWARD

This document can be viewed as a continuation of SAFE: SIMULATION-GAME MANUAL. It consists of instructions and information needed by the game director in order to play the computerized version of the game. The manual is designed to serve five purposes: first, it describes in detail the procedures the game director will need to undertake to assure successful usage of the computer and the advantages it offers. These techniques include information on how to "sign-on" and "sign-off" the system, how to adapt the system to locations where APL is not available, what to do in case of "emergencies," and all likely computer usage costs.

Second, the manual provides the information the director will need in order to organize the players and to help them successfully prepare for each round of the game.

Third, it contains a complete sample run of the computer printout for a ten-year period and also an optimization run in which the computer played the game against itself to see what the optimum number of points possible might be under a given set of policies for decision making.

Fourth, it supplies the completed matrices of Tables VI and VII for each of the five rounds as they are referred to in the game manual.

And finally, it provides a detailed flowchart of the entire game and the complete APL program as well as instructions on how to easily change the influence levels, socievent probabilities and add or change edvents.

Because SAFE is undergoing constant improvement, the author needs

feedback from groups that play the game. It is therefore requested that whenever parts or all of the game are evaluated, a summary of the evaluations be sent to the author through the Department of Educational Administration at the University of Utah. Likewise, if players or the game director develop new edvents, socievents, or educational evaluators, or establish new matrices of their interrelationships, the author would appreciate receiving this information as well.

A paper describing the development of the game and a summary of developmental evaluations made at the University of Utah is available from the author.

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I. USE OF THE COMPUTER

The simulation-game SAFE can be adapted with modest effort to almost any locality and directed by teachers or consultants who have little or no experience in the use of computers. No computer training is required to play or change many aspects of the game. The game director will need to spend only a few hours in practice and preparation before the players can begin participation.

Opening an Account

The first thing the game director will need to establish is where the nearest APL computer facilities are located. The language APL (which means: A Programming Language) was originally designed, and the program provided in this manual was developed on an IBM System/360 computer. Since most other computer systems are now being adapted to handle the language for the business community, one is available in almost every major city and university. The IBM system, however, will be the one referred to in this manual.

The director will need to either "borrow" an account or establish a new one. If a new one is necessary, he will need to phone the management of the computer center and inform it that he wishes to play a simulation-game programmed in APL and which requires an account with a minimum workspace availability of 54,000 bytes. If the management has such facilities, it will help the director establish a new account (which often costs $100.00 or more to open), and locate a computer terminal which he may rent ($80.00 to $120.00 monthly). Needless to say, the easiest and least costly approach is to arrange for the use of already established facilities.

Equipment Needed

One of the advantages of APL is that a small typewriter terminal can be used almost anywhere in the nation and connected with the nearest computer center by telephone. It is not necessary for participants to play the game at the computer center. It can be played entirely at their school or office or wherever -- over the telephone. All that is needed is a communication terminal with an APL typeball, a data telephone or telephone coupler and an APL account.

The terminal may be either an IBM 2741 or numerous other makes designed to handle APL now on the market. It may provide either typed or visual interaction or both. A typewriter has the advantage of providing a permanent copy and is cheaper. The cathode ray tube, however, provides considerably more speed. In either case, it is important that a terminal be rented which has the "interrupt feature" to be discussed later.

If a new account is opened, a data telephone may be rented from the telephone company. The system uses the Western Electric Dataset, Model 103-A2, or equivalent equipment.

The transfer of the game program into the memory of the computer may be accomplished by two means. The director may give the management at the computer center a magnetic on which the entire program has been recoreded or he may hire a programmer to take the print-out of the program as given in this manual (Appendix D) and have it typed into the computer. The former approach is to be much preferred and will save the director considerable expense and time. A magnetic tape is available through the author at the University of Utah.

Signing Onto the System

Once the program is in the computer memory under a specific account number, the director may begin a trial run of the game. To do this he dials by telephone into the computer system, then types in the account number and finally the name of the game. All account numbers begin with a right parenthesis and then eight to twelve digits which follow. For example, the number might be)200290114. Once the account number is typed in, the computer will respond as follows:

```
)200290120
007) 16.05.37  05/03/73  CS150 1
   APL  /  360
SAVED  13.25.32   05/03/73
```

The director may consider himself "signed onto" the system. He next types in the name of the program in the following way. The heading of SAFE is set up as follows: T SAFE R. The T stands for the particular team which is playing (1 of 10). SAFE is the name of the computer program. And R stands for the particular round (1 of 5). If the director is beginning the game for the first time, then he may call himself team 1 (any of the ten will do, however) and begin with round 1. Note, he may not begin any other round before round one has been completed. If he does, the computer may type back: VALUE ERROR, and halt the program before it has typed another thing. The director now types the heading as follows: "1 SAFE 1" and then pushes the return key at the right on the keyboard. If the computer types back VALUE ERROR anyway, it means that the program is not in the system and he must contact the management to

get it in.

Signing Off the System

Once the director has completed the program and wants to get off the system, he needs to do the following: type a right parenthesis and then the word CONTINUE. The computer will respond as follows:

```
)CONTINUE

  16.34.24  05/03/73  CONTINUE
007     16.34.24  05/03/73 CS1
CONNECTED  0.28.47   TO DATE  0.29.51
CPU TIME   0.00.09   TO DATE  0.00.09
```

This information tells him the date, the time this particular work session ended, the length of time he was connected to the computer, and the amount of computer central processing time that was used up for this session and for the day as a total. After this is completed, the director may now consider himself off the system and may turn the terminal off.

Now it is possible the director may wish to "sign-off" the system while still in the middle of a program. If the computer is still typing, then simply push the 'ATTN' (Attention) key at the right of the keyboard and the program will be halted. Then type a right arrow → and this will terminate the propram. Finally, the director may now type)CONTINUE and he is off. If)CONTINUE is typed and the computer refuses to sign-off as shown above, it means that the program has not been terminated. A right arrow with nothing following it must be typed before)CONTINUE is typed again.

When the game director is ready to close out a new account, he simply phones up the computer center and informs the accountant of his intentions. If he borrowed the account, he types)CLEAR and everything in the account is totally erased.

Costs and Locks

APL computer usage is not expensive (once the account has been established) because of time-sharing capabilities of the system. Connect costs vary, but will likely be around $3.75 for each hour the terminal is actively connected to the computer plus 12¢ a second for each second the central processing unit of the computer is being used. For the simulation-game SAFE, this averages out at about $4.80 an hour. Players can usually complete one round of the game in about 27 minutes, or two hours and 15 minutes for the entire five rounds. This means it will cost about $11.00 for each team which plays the entire game. Since as many as 18 student may successfully be on each team (though the recommended number is around 6), costs average at about 60¢ per person per game with a large group and about $3.00 per person per game with a small group.*

If the director inadvertantly leaves his account number around, it is possible for participants or other individuals to get hold of the number and through access to a terminal at another time and/or place, use it for their own programming or private participation in the game and at the director's expense. To prevent such misuse of the system, it is recommended that the account be locked in the following way. When the work session is terminated with)CONTINUE, the director should think up any word with less than seven letters and follow the sign-off with that word. For example, if the name Debra is to be used as a lock on

---

*A very short special-purpose program called COST can be used at the end of playing any round of the game which will tell the participants the cost of using the computer during that round of the game. Simply type COST as shown in the sample run at the end of the game. This cost, however, will be computed at the above mentioned rates.

the account, then the director should sign-off as follows:)CONTINUE: DEBRA. The next time he attempts to sign-on, he must use the name Debra in the heading as follows:)200290114:DEBRA. If he fails to use the lock word as shown, the computer will type back: NUMBER NOT IN THE SYSTEM. The next time he signs off, it is not necessary to use the word Debra again, but rather just)CONTINUE and the computer will lock the account under Debra. But since individuals may also get hold of the key word if it is inadvertantly left around or in the view of on-lookers, it is necessary to change the lock quite frequently. The director may, in fact, sign off with a different word every time and then sign on with the new word. But it is important not to forget the lock! For if forgotten, there is no way for the center to reopen the account by retrieving the lock or establishing a new one. The account must be closed and a totally new one opened. It is recommeded that an algorithm be used to prevent forgetting the lock words.

Supplies

The only supplies which the director will need are a short stack of 15 inch wide terminal paper, a good ribbon for the typewriter, and a game manual for each of the participants. Several small calculators to help participants perform the cost-benefit analysis in rounds 3, 4 and 5 are very useful and much appreciated, but not mandatory.

With respect to the terminal paper, it doesn't matter what color or design the paper has imprinted upon it nor its particular weight. But the program is designed for a width of 15 inches and if the terminal is not printing the full width, then type in the following:)WIDTH 120, and henceforth, it will type the full width of the paper.

Teams

The computer program for this simulation-game is designed to handle up to 10 teams over a given period of time. The program is designed to store all the relevant variables which one team may have generated while another team is playing the game. If it is necessary to have more than ten teams, then the game director must establish two or more accounts with the computer center. The program may be then stored in each account and ten teams can play the game through each account at the same time.

If it is desirable to have two or more teams play the game simultaneously, then two or more terminals must be available and a separate account for each terminal.

Generally, however, one account is sufficient and four teams are all that is needed for the organization of up to 80 participants.

Random Number Selection

As described in the game manual, the occurrence or non-occurrence of socievents and edvent failure is determined by random selection of a number between one and one thousand and comparison of that number with the given probability of occurrence of a particular event. The computer selection of random numbers is newly performed each time the program SAFE is activitated for the analysis of edvent failure, the basic, long-term trend, and revolution, but not for socievent occurrence. The latter is fixed in the program memory so that all teams will experience the same socievent probabilities of occurrence and the only significant differences in game results will be primarily the consequence of different decisions and not chance happenings.

These and all other probabilities may be changed to new values

if the director wishes by doing the following: first, erase the old probability matrix by typing:)ERASE MR and then establish a new matrix of probabilities by typing MR←? 10 12 ⍴ 1000. To check to see how likely it is that nuclear war will occur with the new matrix, type: MR[;12]. The computer will type out ten numbers between 1 and 1000. Each of the numbers stands for the probability that nuclear war will occur during ten of the two-year periods in the game. For example, say the first number the computer types is 34 and the second 589. This means that in the first two-year period, nuclear war will occur if any district has raised its probability factor for nuclear war from 20 to 34 or more. In the next two-year period, the district would have to have raised this probability factor to 589 before nuclear war could occur.

Our experience has shown that a few numbers in the mid-30's tend to considerably raise participant excitement. If a random number for nuclear war is too low (say below 18), then war will likely occur in all the districts and this is too discouraging. If all the random numbers are too high (say beyond 40), then war will likely occur in no district and participants learn to pay little attention to this concern. However, if there are a few random numbers in the middle brackets as suggested, then nuclear war will likely occur in some districts and not in others, and this tends to be quite educational and stimulating. An example of the effects of nuclear war on a district is given in Section VII of this manual.

To preview the probability of occurrence of any of the other socievents, type MR[;X], and put in the place of X any of the twelve socievent categories described in the game manual. For example, say you want to preview how probable the occurrence of ACCIDENTS will

be. ACCIDENTS is socievent 11. So type in place of X the number 11 as follows: MR[;11].

Emergencies

The usage of the computer in SAFE is an experience which all participants seem to thoroughly enjoy. "Emergency" or problem situations do sometimes arise in which the computer responds in "unexpected," "frustrating," and "unintelligible" ways. With a little practice and a good program, most computer problems are easily handled by the director.

Table I below lists the major "emergencies" or problem situations which may arise as the director or students interact with the computer. It also suggests answers about probable causes and what to do.

TABLE I

EMERGENCY OR PROBLEM SITUATIONS

Situation	Cause and Remedy
TYPING ERROR: HOW DO I CORRECT A MISTAKE?	Backspace until the pointer is under the first letter in the error, then push the 'ATTN' key. The computer will erase everything thereafter from its memory. Retype the rest of your answer.
COMPUTER WON'T STOP TYPING	Push the 'ATTN' key and it will stop. Then type → and you are out of the program.
COMPUTER WENT 'DEAD' IN THE MIDDLE OF THE GAME	The telephone connection was probably broken or the terminal accidently turned off. Redial the number and sign-on. The computer will start where you left off.
COMPUTER WON'T ACCEPT MY SIGN-OFF	You are probably trying to sign-off while in the program. Type →. This will terminate the program. Now type your sign-off. If it still won't respond correctly, or at all, the central computer is probably borken down. Turn the terminal off and disconnect the telephone.

Table I continued

COMPUTER WON'T ACCEPT MY SIGN-ON	It could be that the computer is 'down' (temporarily broken), or that you are signing-on incorrectly. Carefully repeat the sign-on procedures. If it still won't accept, call the computer center and ask if the system is 'down' and when it will be 'up' again.
COMPUTER ANSWERS MY QUESTIONS ONLY AFTER THREE TO THIRTY SECOND DELAYS	Since the system is a time-sharing one, it is possible that there are many other users on it. The system will force you to wait your turn until it has answered their questions. This is most often a problem with 'old' systems and in the mid-afternoons.
WHEN I TYPE IN THE HEADING, 1 SAFE 1, THE COMPUTER TYPES BACK: VALUE ERROR	This means that SAFE is not yet in the account's memory. You must have it put in by the management or transferred from another account.
HOW DO I STOP THE GAME WITHOUT COMPLETING THE TEN-YEAR PERIOD?	Just type →, and the round is terminated. All variables are reset as they were before the round began. You cannot start again where you terminated it, but must begin the round over.
THE COMPUTER STOPPED THE PROGRAM AND TYPED: 'DOMAIN ERROR,' OR 'VALUE ERROR,' OR 'SYNTAX ERROR' FOLLOWED BY SOME 'GREEK-LIKE' SYMBOLS	This means that you probably answered the question 'illegally.' For example, you typed a minus sign when you meant a negative sign. To correct, type → and begin the round over again. It could also mean that the program you are using has a 'bug' in it (an error in instructions for the computer). In this case, you cannot proceed with the program. Type → and start another program or sign-off. Save the print-out and ask an APL programmer to correct the problem.
COMPUTER TYPES 'WS FULL' AND THEN STOPS	This means that the workspace you are using is full and you are trying to put more information into it. This will happen if too many teams are using the same account. To correct the problem, terminate the program by typing →. Then type)ERASE MR. Follow this with: CUM←(Tx111)ρCUM, where T is 1 less than the number of teams playing the game. Finally, MR←? 10 12 ρ 1000. Now your system will work again, but don't try to run another new team or the last one on the account unless the number of a team already finished is taken.

Table I continued

COMPUTER FAILS TO TYPE OUT FULL WORDS IN A SENTENCE BEFORE GOING ON TO THE NEXT LINE	This happens when it is not typing the full width for which the program was designed. Type)WIDTH 120, and this problem will be corrected.
HOW DO I START THE GAME IN THE MIDDLE OF A TEN-YEAR PERIOD? HOW DO I SKIP A PERIOD ALTOGETHER?	You can't! It is not possible to start in the middle of or to skip a ten-year period. If you try to skip a period by typing in a later heading than you should, the computer will simply ignore your 'error' and continue where you left off.
HOW DO I GET A FIFTY-YEAR CONCLUSION BEFORE I HAVE CONCLUDED THE FIFTH TEN-YEAR PERIOD?	When you type in the heading, type round 5 irrespective of whatever actual round you are on (except round 1). The computer will act as if you were on the final period, but all the variables and edvent options will continue where you left off.

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FICHE 3

II ORGANIZATION OF PARTICIPANTS

There are many ways in which participants may be organized depending upon the setting, the time available, the capabilities and interests of the players, and the imagination of the game director. It is possible to describe here only techniques that have been successful with the author at the University of Utah.

Participant Teams

The author has played SAFE with from one to twenty members on a team and up to four teams playing concurrently. The game is, however, unquestionably more enjoyable and meaningful to participants when teams have only six or less members. Although the game has been played with many large teams, participants tend to complain about having to wait to use the computer, the problems of large group decision making, and insufficient direction.

With small groups, there needs to be only one game director. His responsibility is to introduce the players to the format of the game, organize the teams, provide the assignments, answer all questions, and dial into the computer center at the beginning of play. It is not necessary for him to actually lead the groups once the game has begun nor to run the computer. We have found that advanced students can quite well handle the preparations for play by themselves if the groups are small and if the manual has been read and the assignments reviewed. It is necessary, however, for the director to go over the instructions for the assignments with the players on the first two rounds of the game to make sure that each member fully understands how to perform the analyses.

With groups of more than six participants, we have found that

more direct leadership on the part of the game director is needed. For larger teams and groups, the game director should divide each team into planning subgroups of five or six persons to allow for maximum participation. Then a representative from each subgroup meets to develop a program for implementation on the computer. With large groups (30 to 60 persons), we have found that at least two game directors are needed. One works with the teams not on the computer. He helps them prepare to go onto the computer and come to a consensus on decisions. Forty-five minutes per team must be allowed for. He also helps the groups just off the system to understand how to do the next assignment. Another director is needed to run the computer terminal itself and to organize and direct the team currently on the system. It is to be noted that the director with both large or small groups does not need to run the computer himself once he has signed on and typed in the heading for the program. We have found that participants very much enjoy running the computer themselves and there is no danger to the program, the computer or the participants in permitting them to do so. The game is 'student-proofed.'

Introductions and Role Playing

Participants in the game should be given copies of the game manual or have access to such at least one week before the beginning of play. The game director should also present to the group an outline of how the game is played, the major variables and concepts involved and the major assumptions upon which it is based. This will serve as a review of the game manual and allow the participants to ask questions about areas of concern which they do not fully understand.

One area of considerable difficulty for most players is concerned with how probabilities are set, changed, and determine various events in the game. Special examples and charts should be provided to review this matter. Another area of concern relates to the seven educational evaluators. When participants are asked to evaluate how these societal groups would judge the various edvents, this proves to be very difficult to do at the beginning of the game simply because the players have such vague concepts in their minds as to exactly what the seven groups stand for. The orientations of these groups need to be gone over in detail (use Table I in the participant manual) and with copious examples. Another technique is to have participants assigned to represent various positions before the others in role playing.

It has also proven successful with the author to have participants in small groups specialize their roles in the last two or three rounds of the game. One member of a team becomes the futurist analyst, another member becomes the public relations analyst, and a third member becomes the cost-benefit analyst. Such specialization reduces the amount of work necessary for the players to do and allows each a chance to concentrate on a special area of interest to him.

Time Required for Participation

Three approaches to scheduling the game SAFE have proven quite successful with the author. The first consists of arranging for three, three-hour periods. During the first period the game outline is reviewed and questions are answered (it is assumed that all participants have read the manual and assignment I). The teams form their groups for 20 minutes and prepare a decision plan. This is implemented on the

computer, the results are analyzed, and the next assignment is given for rounds II and III which will be played during the next period. During the third meeting rounds IV and V are played. Following the fifth round, participants are given the evaluation form and asked to fill it out. This takes about twenty minutes.

A second approach is to arrange for six, one and one-half hour periods. During the first period, players are introduced to the game through a presentation by the game director. They are given the first assignment. During each of the five succeeding periods, one round of the game is played on the computer and assignments for the next round are given and explained. Again, after the last round, the evaluation form is handed out and participants are asked to spend a few minutes completing it.

If time is available, one period should be reserved after the game is completed for discussion of the assumptions upon which it is based, the model of societal and educational interrelationships it presents, the choices participants made and the effects thereof, and finally, the learning value of the experience.

The third, and perhaps the best approach if sufficient time is available, is to arrange for twelve one or more hour periods. During each of the first three, participants are asked to read one-third of the manual. During class discussions, the ideas in the manual are reviewed, short quizzes are given to test comprehension, and techniques such as role playing may be used to teach the seven value orientations. During the third period, the first assignment is prepared for implementation on the computer. The 4th, 6th, 8th, 10th and 12th periods are used for interaction with the computer. During each of the periods

in between, questions are answered, assumptions discussed, and preparations made for the next round.

Another way to approach the game if 12 or more sessions are available and the participants are advanced students who have time for outside assignments, is to spend the first period previewing and introducing the game. During periods two through six the game is played. For the 7th and 8th periods, the game is critically discussed and new edvents are invented, new power structures created and new socievent interrelationships worked out. Then on rounds nine through twelve the game is played again with the new values and interrelationships.

Since all computations are handled, summed and analyzed by the computer, it is not necessary for the game director to spend much extra time other than that outlined for the specific sessions and his initial preparations. On the average, students will need to spend about one and one-half hours in preparation for each of the five rounds of the game. This includes detailed reading of the manual.

Participant Assignments

Appendix B in the game manual contains five complete assignments which the author has successfully used in this game. They are included in the other manual to save the director considerable time and cost in duplicating these materials. The problem in developing these assignments has been to discover a technique to introduce participants to the complexities of the game without discouraging them by its many variables or by excessive homework. Our approach has been to increasingly make the assignments more comprehensive while at the same time less repetitious. Completed tables are never given for the reason that participants then no longer bother to read the edvents or to think

about the evaluators and how the socievents and the edvents relate to them. However, these assignments can be modified to fit the needs and interests of the particular group which is using the game.

Assignments III, IV and V are in alternate forms in the game manual. One-half of the participants should be assigned to complete Part I and the other half, Part II. The assignments have been designed this way in order to reduce the preparation time required of participants.

Appendix D in the game manual contains a copy of the game evaluation form which players are asssigned to complete as homework following the last round.

III SAMPLE RUN OF THE GAME

Appendix A contains a sample run of the game. This includes a complete ten-year period and the conclusion to the round.

In the top left-hand corner of the sample is typed:)200290114: ZOOK. This is what the game director types in order to connect the terminal to the central computer (of course, this number will vary according to the director's account and specific lock as explained earlier). The computer types back the date, the system, and when the workspace was last used. To begin playing the game, the director types 1 SAFE 1. This means that the first team is about to play the first round of the game. The computer responds by typing: INTRODUCTION, the beginning of the ten-year period, and the trend resulting from general societal and international developments. In the example in the Appendix, this is the first ten-year period, 1975-84, and the general trend is toward extreme liberalism. Over each of the five two-year planning periods, the liberals will be considerably strengthened. The most the planning committee can do is to speed it up somewhat or to slow it down. The most frequently occurring general societal trend is toward moderate liberalism. Since these trends are determined stochastically, they will likely differ every time.

The system next types out the edvent options which may be purchased during this round. Participants may choose any number they wish, but not an edvent which is not presented, nor may these choose any edvent twice. They are also to respond by typing in the edvent number, not the name of the edvent. If any of these restrictions are violated, the computer will inform the players of their error.

It is often useful to players to know what the immediate effect of an edvent selection is upon the influence levels and the socievent probabilities. When the computer asks for an edvent choice, if the player types a 1 as a second number in addition to the number of the choice, then the computer will follow the evaluation of the choice with all the exact effects of the choice and the new resulting totals. For example, if at the beginning of the second round the committee chooses edvent 20 and types it as follows: 20 1, the computer will follow the evaluation of the choice with the following information:

INFLUENCE CHANGES: 0 -3 -4 2 2 2 2 TOTALS: 21 294 354 120 130 71 5
SOCIEVENT CHANGES:0 0 8 -4 0 -8 -4 0 0 0 -8 -2
TOTALS: 680 66 235 270 97 63 145 116 146 50 58 19

The seven numbers listed after INFLUENCE CHANGES represent the seven power groups and how much they changed because of the edvent implemented. The first number in the string represents changes for the Neo-perennialists, the second number represents the Essentialists, etc. The socievent numbers are also listed in order according to the listing of the twelve socievents in the game manual.

After an edvent is selected, the computer will immediately evaluate the decision as described in the game manual. If a given choice is not one of the two best possible ones for gaining immediate public satisfaction points or for avoiding undesirable socievents, then participants will be accordingly informed and a ranking of their choice in relations to all the other ones will be provided. Likewise, if a decision is not one of the two best ones with respect to a cost-benefit analysis, the computer will state that a must better choice could have been made and again proceeds to give the ranking of the choice in relation to each of the other possibilities. It is to be noted that a decision may

be ranked high for earning points, yet relatively low in the cost-benefit analysis because of its extreme cost.

Teams may purchase as many edvents in any given two-year period as they wish, but once they are in debt, 5% interest will be charged at the end of that two-year period. When no more edvents are to be implemented, a 0 is typed.

Participants are next asked if they want to purchase edsurance. As explained in the game manual, this does not rule out the possibility of the occurrence of undesirable socievents, but only reduces such by two-thirds. The computer will type out what socievents, if any, would have occurred if edsurance had not been implemented. Our experiencd shows that players are reluctant to buy edsurance at the beginning, but after the second round they tend to buy it for all the socievents. If edsurance for all the socievents is wanted, this may be done by simply typing a single 1 and then pushing the return key. The computer automatically interprets this as a 1 for each of the socievents. If, however, edsurance for only specific socievents is desired, then a 1 must be put under the ones for which it is desired and a 0 under each of the others. In other words, either one number must be typed or seven numbers must be typed and all numbers must be either 1 or 0. It is not possible in the game to fractionally implement edsurance. If a 1 is typed under the socievents for which edsurance is wanted and nothing is put under the others, then the computer will interpret this as edsurance for ALL the socievents and the team is charged accordingly. If any number other than a 1 or 0 is typed under the socievents, the computer will interpret this to mean a 1.

As with edsurance, edvertising requires a response from the participants as described in the game manual. If edvertising is desired for all the evaluators, then a single number between 1 and 10 may be typed and the computer interprets this to mean that number for each of the groups. If no edvertising is desired, then a single 0 may be typed and this is interpreted as 0 for each of the groups. If, however, edvertising is desired for some and not for others, or for each in different quantities, then a number must be typed under each group accordingly. If, for example, edvertising is wanted for the Essentialists and the Social Realists and not for the others, then the team types a number between 1 and 10 under these two and 0 under each of the others. If the team were to type nothing under the others, the computer would interpret this as edvertising desired for all of the groups in the quantities stated under the desired ones. If participants type a number greater than 10 or less than 0, the computer will inform them of their error.

At the end of each two-year period, the computer will type out the total satisfaction points which the team has earned since the beginning of the ten-year period.

At the conclusion to the ten-year planning period the total points earned in the game and the total funds remaining in the account are typed out. The computer then proceeds to inform participants how each of the seven educational evaluator influence levels has changed. As noted in Appendix A, the last statment 'ED F' stands for 'Educational Failure' and shows how its probabilities have changed during the game.

Finally, the computer types out how each of the edsurance costs has changed according to the formula described in the game manual.

Before the computer terminates any of the first four rounds, it will store in its memory all significant variables which have been generated by the team during the ten-year planning perid. The next time the team signs on, these variables will be recalled and the team will proceed from where it left off. This is only possible, however, once the team has completed the ten-year planning period. If the team should for some reason type a right arrow and thereby terminate the game before the ten-year period has ended, then the information for this round is not stored and all variables remain as they were before this specific round began. The next time the team signs on, the computer will act just as if this partial round had never taken place.

Should the game director want a read-out of how the variables have changed before the team has completed the round, then he can use the special feature mentioned earlier. If the game is terminated early and a print-out of how all variables have changed is desired, the game director needs only to type STATUS and the computer will proceed to analyze and type out how all variables have changed so far in the game. Players may also see what new edsurance costs would be at this point in the game by typing INSURE.

At the conclusion of the fifty-year period, the computer makes a total analysis of all significant changes in the game by typing out the following:

1) Whether the district has gone bankrupt or not as described in the game manual. And if so, how many satisfaction points have been lost.

2) Total satisfaction points earned during the entire game.

3) A listing of the titles of all edvents purchased during the entire game.

4) A print-out of the terminal values for the influence levels of the educational evaluators, the probabilities of occurrence for each of the twelve socievents, and the direction and degree to which each has changed during the entire game.

5) Total loses due to the occurrence of undesirable socievents. Since the probability of occurrence of socievents is the same for all teams, this is an indirect measure of the quality of a team's perceptions with respect to the environment.

6) The total satisfaction points earned per million SD investment in education. This last analysis serves as the most comprehensive single summary of the efforts of a single team during the entire game. It provides an overall summary of the quality of educational decision making.

IV MODIFYING THE GAME

SAFE is designed so that the game director or students can easily modify the initital influence levels of the evaluators as well as the probabilities of occurrence for the socievents, redesign old and add new edvents, or change the impact of socievents upon themselves, the evaluators, and the district account.

Changing the Initial Values Before the first round of SAFE has begun, the initial influence levels and socievent probabilities given in the participant manual may be permanently reset. To change these initial values, the game director types VALUES 1, and pushes the return key. The computer will automatically ask the question:

INDICATE UNDER EACH EVALUATOR ITS PERCENTAGE OF INFLUENCE
NEO ESS SOC EXP REC HUM BIO

You then type under each of these groups the new influence levels you want to give them. A number must be typed under each one or the computer will repeat the question. If you want a group to have no influence, type a -85 under it and a 0 for all interrelationships. If you are displeased with one of the influence groups and want to change it, then simply redefine it and give it a new influence level. Note, however, that it will still be identified by the original abbreviations. Also, if you redefine an influence group, you will probably need to change the way it views all of the edvents.

Next the computer will ask the question:

INDICATE UNDER EACH SOCIEVENT ITS PROBABILITY OF OCCURRENCE:
GNP GRE COM NAT CON PAR TEA STU PRI ACC RED NUC

You then type under each of these groups their new probabilities of occurrence. If you don't type a number under each one, the computer wi

will automatically assign it a number (probably one much higher than you had in mind). If any number is below 18, the computer will automatically change it to 18. After completely answering these two questions, the computer will stop typing. You may proceed to begin the game.

The values which are changed are permanent for all teams which thereafter play the game. To reinstate the original values given in the game manual, the game director types VALUES 6 and the old values are permanently reinstated.

Changing the Edvents SAFE is designed so that the game director or students can also permanently change the edvents. A special subroutine has been designed to accomplish this so that an APL programmer is not necessary. If the director wants to change an edvent after signing on, he simply needs to type the letters SG and push the return key. Note, however, that you cannot change edvents while in the middle of a ten-year period. The computer will immediately ask:

WHAT IS THE NUMBER OF THE EDVENT TO BE CHANGED?

You respond with a number between 1 and 60. It is not possible to add an edvent without erasing one. For example, you cannot have edvent 61 or 70. But you can erase edvent 42 and replace it with a new one. When you type the number of the edvent to be changed, the computer automatically erases that edvent from its memory and then asks:

STATE IN 21 LETTERS OR LESS THIS NUMBER AND THE NEW NAME:

You respond by typing in the number and the new abbreviated name. If the name you type in is too long, the computer will repeat the question. If you want to keep the old name, then you must type it back in. Next

the computer asks:

INDICATE THE DEGREE TO WHICH EACH EVALUATOR FAVORS OR DISFAVORS IT:
NEO ESS SOC EXP REC HUM BIO

You respond by typing a number between -3 and +3 under each of the influence groups as done in the assignments. These numbers may be the result of your personal intuitions or a group consensus. If you don't type a number under each of them or if any number is greater than 3, the computer will repeat the question. Next it asks:

INDICATE THE DEGREE TO WHICH IT CHANGES SOCIEVENT PROBABILITIES:
GNP GRE COM NAT CON PAR TEA STU PRI ACC RED NUC

You respond by typing a number between -6 and +6 under each of the socievents as done in the assignments. If you fail to type a number under each one, the computer will repeat the question. Finally, the computer asks:

STATE ITS COST IN MILLIONS OF STATOSDOLLARS:

You respond by typing how many millions of Statosdollars it costs. For example, if it costs thirteen and one-half million, you type 13.5. If it costs 600,000 you type 0.6. If you type a number greater than 1000, it will repeat the question for no edvent could cost more than a billion Statosdollars. Following this answer, the computer will simply stop. If you want to change another edvent, you must type SG again and the program will repeat itself.

Changing the Socievents SAFE is designed so that the game director can also permanently change the costs and effects of socievents. Another special subroutine has been designed to accomplish this so that an APL programmer is not necessary. No socievent effects can be changed if you are in the middle of a game or any other program. To change any

of the twelve socievents, simply type SF and push the return key. The computer will respond with the question:

WHAT IS THE NUMBER OF THE SOCIEVENT TO BE CHANGED?

You must respond with a number between one and twelve. It is not possible to add a new socievent, though old ones can be redefined; nor is it possible to change the abbreviation used in the game to stand for a socievent. With this program you can change the effects of any of the twelve socievents upon themselves or the evaluators as well as their costs. If you type a number below 1 or greater than 12 the computer will repeat the question. Next it asks:

INDICATE THE DEGREE TO WHICH THE EVALUATORS BECOME MORE OR LESS INFLUENTIAL IF THIS SOCIEVENT OCCURS:
NEO ESS SOC EXP REC HUM BIO

You respond by typing a number under each of the abbreviations which show how much more (+) or less (−) influential that evaluator will become if that socievent occurs. Table IV in the game manual shows the original values. If you fail to type a number under each one, the computer will repeat the question. Now it asks:

INDICATE THE DEGREE TO WHICH EACH SOCIEVENT WILL BECOME MORE OR LESS PROBABLE:
GNP GRE COM NAT CON PAR TEA STU PRI ACC RED NUC

You respond by typing a positive or negative number under each of the abbreviations for the twelve socievents which shows the degree to which the probability of occurrence of that event is changed if the given socievent occurs. Table III in the game manual shows the original values. If you fail to type a number under each one, the computer will repeat the question. Finally, the computer will ask:

STATE THE COST OF ITS OCCURRENCE TO THE DISTRICT IN MILLIONS OF STATOSDOLLARS

You respond by typing a positive number if the occurrence of the socievent will earn the district money (as in socievents 1-4) and a negative number if its occurrence will lose the district money. For example, say you decide to change the cost of socievent 12 (Nuclear War) to the district from 125 million Statosdollars to 50 million Statosdollars. You respond to the question by typing: -50, which means that if nuclear war occurs, the district will lose 50 million Statosdolars. If a number greater than 1000 is typed, the computer will repeat the question, for no socievent can cost the district more than a billion Statosdollars.

Following the answer to this question, the computer will simply stop. If you want to change another socievent, you must type SF again and the program will repeat itself.

V THE MATRICES OF INTERRELATIONSHIPS

It is the purpose of this section to describe the usage of the tables in Appendix B and to explain to the programmer (should one be used to set the game up) how the various arrays are arranged from the tables for usage in the program. The game director unfamiliar with APL may skip the next three pages.

Appendix B contains completed cross-impact matrices for Tables VI and VII as used and described in the game manual and for all sixty edvents and each of the socievents. These interrelationships are hypothesized strictly for the purpose of playing the game and do not presume to accurately represent real relationships in society at large.

The information from these tables has already been put in the participant assignments where it is appropriate, but may be taken directly from the tables when needed. Table VI contains the information which the computer uses for determining the effects of various edvents on the educational evaluators. Table VII contains the information used for determining the effects of the selection of edvents on the probability of occurrence of the various socievents. These effects in TableVII are exactly one-half the effects the computer registers and uses for its computations. These complete matrices of effects may be doubled, tripled or halved with ease to suit individual needs.

Tables VI and VII are referred to in the computer program in the form of two arrays called MATRIX and MUT. MATRIX is a 60 by 21 array (containing 1260 numbers) each horizontal line of which contains 21 numbers with the following information. The first number is a 0

and stands for the implementation or non-implementation of the edvent the line represents. It is programmed as 0 and is changed to 1 if the edvent is implemented. The second number is the cost of the edvent in hundreds of thousands of Statosdollars. For example, Career Education costs 11 million and is programmed in MATRIX as 110. The next twelve numbers state the effects of the particular edvent on each of the twelve socievent probabilities as given in Table VII. The last seven numbers state the effects of the edvent choice on the satisfaction of the educational evaluators as taken from Table VI under the given edvent. There are 60 such lines of 21 numbers -- one line for each edvent. This information is programmed into the computer in the following way:

A←0 110 1 0 1 2 -1 0 0 -2 2 1 1 1 1 -1 1 2 2 1 1

B←0 125 -1 -3 2 1 and so on for each of the 60 edvents

MATRIX←60 21 ⍴ A,B,C,D,E, up through 60

In order to save workspace:

)ERASE A B C D E . . .

Tables III and IV have been set up in an array called MUT with dimensions 12 by 20. It is shown in Appendix E. The matrix of randomly selected numbers is assigned the name MR and is described in the first section of this manual.

The array NAMES has dimensions 60 by 21 and consists of abbreviated names of each of the 60 edvents. There are many ways to establish such an array. The author has found it conveneient to create 12 vectors (A through L) each line with a length of 105. The names of the edvents are abbreviated to fit into a space of 19 or less letters with two spaces

reserved for the number of the edvent. This allows five names to be typed onto a line with equal spacing at 21. The array is created in the following manner:

NAMES←60 21⍴ A,B,C,D,E,F,G,H,I,J,K,L

Again to save workspace:

)ERASE A B C D E F G H I J K L

The final array MAT has been established in an almost identical manner. It is shown in Appendix D and was created with twelve vectors of length 100.

MAT←12 100 ⍴ A,B,C,D,E,F,G,H,I,J,K,L

)ERASE A B C D E F G H I J K L

The relevant variables which each of the ten teams have generated are stored in the vector CUM. If the program to the game is typed from the manual into the computer, then CUM must be separately defined as follows before SAFE may be run: CUM←0. Furthermore, everytime the game is newly started, the old variables saved may be erased by setting CUM to zero.

Appendix D also contains two small arrays designated as SB and SC. These two matrices are used in the main program for determination of the general multifold societal and international trend which is typed out at the beginning of every ten-year period.

SB sets up the four possible alternative trends over any given ten-year period. It may be easily changed to describe any number of possible trends.

SC contains the 19 influence and socievent effects which the occurrence of one of the four trends has upon the district every two years. The first seven numbers on each line show the effects of that

trend upon the influence levels in the district. The last 12 numbers on each line show the effects on the socievent probabilities. For example, if the trend toward extreme liberalism is randomly selected (16% chance), then every two years line four of SC is calculated into the influence and probability levels. The liberals gain influence and the conservatives lose influence (up to 30 points each way over the ten years). Many negative socievents including nuclear war become much more probable.

SC may also be modified quite easily in the same way that each of the other matrices are modified. For example, if the increase in nuclear war is undesired with extreme liberalism, and you prefer it to be 0, then type as follows: SC[4;19]←0. This means that the fourth row and the nineteenth number on it is to be given the new value of 0 in the matrix SC.

VI FLOWCHARTS AND THE APL PROGRAM

Appendix C contains the flowchart for the main program, SAFE, and the five subprograms, VALUES, INSURE, REVOLUTION, STATUS and CHOICE. The purpose of the flowcharts is to provide the interested director with a detailed outline of the entire game in a way which can be easily read.

The five subprograms are necessary parts of the main program, but are written separately in order to facilitate construction and testing of the game, as well as to make possible, under certain circumstances, special information availability when the game is not being played. As described earlier, it is possible with each of these subprograms to analyze certain variables in the game when the game is not being played. For example, STATUS can be initiated to analyze the changes which have occurred during the course of a partial round when it has been earlier.

With the use of subprograms it is also possible to rewrite the major forms of analysis without touching the main program. For example, if the director is displeased with the initial values, subprogram VALUES can be implemented to change the initial values as shown in Section III. If a new model for revolution is desired, subprogram REVOLUTION could be redesigned, again without changing the main program, but an APL programmer would be necessary.

Appendix D contains the APL computer program for SAFE, the subprograms for VALUES, INSURE, REVOLUTION, STATUS and CHOICE. It also contains the arrays MUT, MAT, SB, and SC. Finally, it includes the modification programs SF and SG.

VII OPTIMIZATION SCENARIO

This section shows what may happen when the computer is programmed to play against itself. The purpose of such a run is to determine more clearly the assumptions programmed into the simulation and the long-range consequences of a given set of policies which are maintained throughout the fifty years.

For lack of space, only one example is included in this manual. There are an infitie number of scenarios which the computer could generate according to various policies set up at the beginning of the game. This optimization run was based on the following assumptions and policies:

1) A cost-benefit analysis program will be used which under all circumstances weights public-relations concerns double the long-range futurist concerns (Note, this is not always the policy by which the computer generally analyzes participant decisions).

2) No edvent will be implemented if the district account is less than 2 million.

3) No edvent will be implemented if the total number of satisfaction points is promises are less than 200.

4) Only the best edvent which results from the cost-benefit analysis will be implemented.

5) All the edsurance available will be purchased.

6) Noedvertising will be implemented unless the account is greater than two million and a cost-benefit analysis suggests it to be the best choice when compared with edvent implementation.

7) No consideration will be given to the possibility of revolution. No special consideration will be given to possibilities for a nuclear

disaster beyond that which the cost-benfit analysis provides.

In addition to the many general assumptions upon which the game is based, this optimization model further assumed that all edvents are successes.

When the computer began the first round, the years 1975-84 went very well. Six edvents were implemented and the district was only very slightly in debt in 1985. All total, 4,939 points were earned -- extremely high for the first ten years of the game. The district became more conservative during four during four years and more liberal over the other six -- so there was a gradual shift towards liberalism. The probability of undesirable socievents went up slightly each time the district became more conservative. Only two negative socievents occurred -- both teacher strikes, in 1975 abd 1979.

The second planning period, 1985-94, went even better. The total points earned for the decade went up a full thousand to 5,930. A total of seven edvents was implemented, one more than in the last period and the district ended the ten years with eight million in surplus funds. Only one negative socievent occurred -- a major school accident in 1987. Edsurance was successful in avoiding the effects of teacher stikes and most other problems. The federal government increased its support for education during four of the five two-year periods. In 1991 even a major breakthrough in school efficiency occurred. And four out of five times the district became more liberal.

During the third planning period, however, things began to go very badly for the district. One would never suspect such problems, however, when looking at the first two years, 1995-96. Two major edvents were implemente during these years and almost 1500 points were

earned. But the probability of undesirable socievents went up an ominous 20 points.

Again the district became more liberal. For many years now liberalism had taken hold of the district and struggled to control all influence. This was bad in so far that it caused certain other groups to lose all influence in thecommunity and thus form a basis for revolution.

As might be expected after many years of a policy which considers only the powerful, the basis for a revolution rose to 20% in 1997. Although no revolution occurred, parent protests did in response to the implementation of "Schools of Relearning." The conservatives began to reassert themselves. Still, a whopping 1743 points were earned.

In 1999 the two groups which had alost all influence staged a revolution and failed. A powe: concentration into the hands of the most powerful group resulted, and since this was still a conservative group, the district became considerably more conservative. Twenty million in damages and delays were incurred in addition to the costs of the student riots. The probability of undesirable socievents went up a full 59 points. Most threatening, however, was the fact that national jingoism and retaliatory measures radically raised the probability of a minor nuclear holocaust.

In 2001 no edvents were implemented because of excessive debts. In fact, no edvents were ever again implemented because of debts. Instead, the Null Option was chosen. Then teacher strikes occurred and a major accident. Finally, just two years after the revolution failed, dissidents triggered a minor nuclear holocaust in the

district. This plunged it into crisis level debts. It became much more conservative and assurred the unliklihood of ever implementing new edvents for many years to come. The probability of undesirable socievents occurring went up 20 points again. Also the probability of another nuclear holocause went up. The game assumes that these disasters are 'minor' ones in which most of the citizens survive. They may be considered the product of small nuclear devices which are set off by third-world retaliatory forces or radical minorities.

In 2003 not much happened. The public remained very unhappy because of the debts and the increased taxes they necessitated. Another 600 points were lost and the district became a little more conservative.

In retrospect, looking over these traumatic ten years, the district went into debt some 150 million Statosdollars. It earned 4300 satisfaction points, but this was way down from previous levels. Yet it was an interesting decade. It suggests what may happen in the game when participants fail to consider all the wants of the power groups. Such a rapid succession of disasters, however, is unlikely in the game because their probabilities of occurrence are now set much lower. But when revolution does occur, the moderates begin to lose their influence to the radicals on both extremes, power concentrates, change becomes threatening, and the schools stagnate.

In 2005 the district became a little more conservative because of the repeated use of the Null Option. But by 2007, the basis for another revolution was well established. It had been only eight years, and the same groups which had tried once before and failed, now staged a successful revolution. But the probability of undesirable socievents went up a threatening 105 points. The district was now radically

liberal.

In 2009 the district became even more radical, but the constant use of the Null Option turned it slightly conservative in 2011 again. In this year student riots again occurred. But no basis for a counter revolution had yet formed.

In 2013 the liberals managed to muster up considerable community involvement as they had done in 2011. In addition, they also acquired greater national support.

It had been another traumatic decade. No retaliatory nuclear war had occurred, but a successful revolution did, and debts were considerably increased. No satisfaction points were earned because of social unrest due to the burden of higher taxation. Citizens were losing what faith they had left in the schools -- and the district stuck to the policy of no reform when excessive debts still existed.

The last ten years of the history of the district is a tale almost too sad to tell. In 2015 a major parental boycott occurred in response to problems over the schools. A major closing of the private schools exacerabated the issues. In response, the district became more conservative.

The long-expected retaliation sequel to the first nuclear war caught up with the district in 2017 as a conservative reaction was followed by a second nuclear holocaust. As expected, enormous amounts of satisfaction points were being lost by the district decision to again increase taxes and avoid all reforms.

If students had been playing the game, the computer would have at this point terminated the game because debts had increased beyond 200 million.

In 2019 the liberals managed to make a little headway again, but to no availa as the third retaliatory nuclear explosion occurred in 2021 and a fourth in 2023. With the third, the district went into extreme radicalism, and when this failed with the fourth bomb, it became radically reactionary -- that is, those still alive became reactionary.

In conclusion, one senses that the disaster and revolution sequence all began back in 1975 when the district established the policy of ignoring the needs and wants of minorities and decided to cater stricktly to the powerful in the hope of maximizing satisfaction points. Furthermore, it established conservative economic policies which doomed it in crisis situations. Within 20 years the minorities had formed the basis for a revolution, and though it failed at first, it later succeeded with the help of the first nuclear holocaust. It was this first failure at revolution, however, which sufficiently raised the probability of a holocause to cause it to occur. The bombs occurrence promoted the possibility of another revolution, and the second revolution further promoted a second nuclear holocaust, which triggered a third, and then a fourth. A vicious cycle had begun which within 15 years completely distroyed the district.

In reviewing the seven power groups and the changes that occurred to them, one is impressed by how considerably these disasters led to power increases for the radical elements in society, on both sides of the spectrum. One is not surprised to see that the Human Potentialists faired poorly under such circumstances, but why did the Experimentalists get wiped out? Perhaps because they more than anyone else stood for scientific approaches and objectivity -- both unpopular positions when society is blundering from one major crisis into another.

Perhaps science was blamed for it all, or people lost faith in it because it seemed to be unable to do anything about the recurring disasters.

With respect to the socievents, it is interesting to note how radically GNP growth, efficiency and community involvement delcined in these periods of crisis and shifts in power units, but how significantly national involvement increased. Parents were appearing helpless and teachers stunned as everyone came to look to some higher source for help.

APPENDIX A

Sample Run of the Game

First two-year period 42

Ten-year conclusions 50

)200290114:ZOOK

1 SAFE 1

INTRODUCTION

YOU ARE ABOUT TO PLAY THE GAME SAFE --A SIMULATION OF THE FUTURE OF EDUCATION FROM 1975 TO 2024 A.D.
YOU REPRESENT DISTRICT 1 AND ARE NOW RESPONSIBLE FOR EDUCATIONAL DECISIONS FROM 1975 TO 1984.

BEGINNING: 1ST TEN-YEAR PLANNING PERIOD

GENERAL SOCIETAL AND INTERNATIONAL DEVELOPMENTS OVER THIS DECADE WILL STRENGTHEN INFLUENCE GROUPS IN YOUR DISTRICT FAVORING EXTREME LIBERALISM.

YOU ARE NOW LIVING IN THE YEAR 1975. YOUR EDVENT OPTIONS ARE:

1 CAREER EDUCATION
2 VOUCHERS
3 ACCOUNTABILITY
4 AUTHORITARIAN SCHOOLS
5 FAMILY LEARNING CENTER
6 COMMUNITY NURSERY CENTER
7 HOME STUDY PROGRAM
8 EDUCATION AS VOCATIONAL TRAINING
9 COMMUNITY GUIDANCE CENTER
10 EXPERENTIAL LEARNING SCHOOLS
11 INTERACTIONAL CATV SCHOOLS
12 INDIVIDUALIZED LEARNING SCHOOLS

YOUR ACCOUNT HAS JUST BEEN CREDITED WITH SD 12 MILLION FROM TAX REVENUES.
TOTAL DEPOSITS IN YOUR ACCOUNT NOW ARE SD 12 MILLION.

WHICH EDVENT WOULD YOU LIKE TO IMPLEMENT THIS YEAR? IF NONE, TYPE 0.

1.
YOU MADE ONE OF THE BEST POSSIBLE CHOICES FOR GAINING IMMEDIATE PUBLIC SATISFACTION.
CAUTION: YOU DID NOT MAKE ONE OF THE BEST LONG-RANGE DECISIONS WHEN CONSIDERING SOCIEVENTS.
ANALYSIS RANKS IT 6.
A COST-BENEFIT ANALYSIS SUGGESTS THAT YOU MADE AN EXCELLENT OVERALL DECISION.

UNFORTUNATELY, YOUR INNOVATION IS A FAILURE. HALF OF ITS SATISFACTION POINTS ARE LOST.

YOU HAVE REMAINING IN YOUR ACCOUNT SD 1 MILLION.
IS THERE ANOTHER EDVENT YOU WOULD LIKE TO IMPLEMENT DURING THIS TWO-YEAR PLANNING PERIOD?

```
    3
YOU MADE A GOOD, BUT NOT ONE OF THE BEST CHOICES FOR GAINING IMMEDIATE PUBLIC SATISFACTION.
     ANALYSIS RANKS IT 6.
CAUTION: YOU DID NOT MAKE ONE OF THE BEST LONG-RANGE DECISIONS WHEN CONSIDERING SOCIEVENTS.
     ANALYSIS RANKS IT 7.
YOU HAVE MADE A REASONABLE COST-BENEFIT CHOICE, BUT OTHERS WERE BETTER.  ANALYSIS RANKS IT 6.

YOUR INNOVATION IS SUCCESSFULLY IMPLEMENTED.

YOUR DISTRICT IS NOW IN DEBT 6.5 MILLION.
IS THERE ANOTHER EDVENT YOU WOULD LIKE TO IMPLEMENT DURING THIS TWO-YEAR PLANNING PERIOD?

    0
INDICATE BELOW HOW YOU WANT TO EDSURE TO CHANGE SOCIEVENT PROBABILITY LEVELS:
     CON PAR TEA STU PRI ACC RED

    1
DURING 1975 AND 1976 THE FOLLOWING SOCIEVENTS OCCURRED:
1 NATIONAL GNP GROWTH EARNS YOUR DISTRICT SD 2,225,000.
7 TEACHER STRIKES COST YOUR DISTRICT SD 4,500,000

INDICATE BELOW HOW YOU WANT TO EDVERTISE TO CHANGE INFLUENCE AND SATISFACTION LEVELS:
     NEO  ESS  SOC  EXP  REC  HUM  BIO

    1
EDVERTISING COST YOU SD 2.002 MILLION DURING THIS TWO-YEAR PERIOD.
FOR THIS YOU EARNED AN ADDITIONAL 100.1 SATISFACTION POINTS AND INCREASED INFLUENCE LEVELS
BY 0 POINTS.

YOU HAVE BEEN CHARGED SD 606,569 INTEREST FOR OVERDRAWING YOUR ACCOUNT.

THIS TWO-YEAR PLANNING PERIOD HAS NOW ENDED. YOU EARNED 669 SATISFACTION POINTS.
TOTAL SATISFACTION POINTS EARNED SINCE 1975 ARE: 669.
YOUR DISTRICT HAS BECOME MORE CONSERVATIVE.
NOTE: THE PROBABILITY OF UNDESIRABLE SOCIEVENTS OCCURRING HAS GONE UP BY 30 POINTS.
NOTE: THE PROBABILITY OF EDVENT FAILURE HAS GONE UP BY 18 POINTS.
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YOU ARE NOW LIVING IN THE YEAR 1977. YOUR EDVENT OPTIONS ARE:

2 VOUCHERS
4 AUTHORITARIAN SCHOOLS
5 FAMILY LEARNING CENTER
6 COMMUNITY NURSERY CENTER
7 HOME STUDY PROGRAM
8 EDUCATION AS VOCATIONAL TRAINING
9 COMMUNITY GUIDANCE CENTER
10 EXPERENTIAL LEARNING SCHOOL
11 INTERACTIONAL CATV SCHOOL
12 INDIVIDUALIZED LEARNING SCHOOL
13 EDUCATION AS AN OCCUPATION
14 SOCIETY SCHOOLING

YOUR ACCOUNT HAS JUST BEEN CREDITED WITH SD 12 MILLION FROM TAX REVENUES.
YOUR DISTRICT IS CURRENTLY IN DEBT 0.737944 MILLION.

WHICH EDVENT WOULD YOU LIKE TO IMPLEMENT THIS YEAR? IF NONE, TYPE 0.

10
UNFORTUNATELY, YOU WILL LIKELY LOST POINTS BY THE IMPLEMENTATION OF THIS EDVENT.
ANALYSIS RANKS IT 10.
CAUTION: YOU DID NOT MAKE ONE OF THE BEST LONG-RANGE DECISIONS WHEN CONSIDERING SOCIEVENTS.
ANALYSIS RANKS IT 8.
YOU HAVE MADE A REASONABLE COST-BENEFIT CHOICE, BUT OTHERS WERE BETTER. ANALYSIS RANKS IT 10.

UNFORTUNATELY, YOUR INNOVATION IS A FAILURE. HALF OF ITS SATISFACTION POINTS ARE LOST.

YOUR DISTRICT IS NOW IN DEBT SD 8.73794 MILLION.
IS THERE ANOTHER EDVENT YOU WOULD LIKE TO IMPLEMENT DURING THIS TWO-YEAR PLANNING PERIOD?

8
UNFORTUNATELY, YOU WILL LIKELY LOST POINTS BY THE IMPLEMENTATION OF THIS EDVENT.
ANALYSIS RANKS IT 11.
CAUTION: YOU DID NOT MAKE ONE OF THE BEST LONG-RANGE DECISIONS WHEN CONSIDERING SOCIEVENTS.
ANALYSIS RANKS IT 11.
YOU HAVE MADE A REASONABLE COST-BENEFIT CHOICE, BUT OTHERS WERE BETTER. ANALYSIS RANKS IT 11.

YOUR INNOVATION IS SUCCESSFULLY IMPLEMENTED.

YOUR DISTRICT IS NOW IN DEBT SD 15.2739 MILLION.
IS THERE ANOTHER EDVENT YOU WOULD LIKE TO IMPLEMENT DURING THIS TWO-YEAR PLANNING PERIOD?

0
INDICATE BELOW HOW YOU WANT TO EDSURE TO CHANGE SOCIEVENT PROBABILITY LEVELS:
CON PAR TEA STU PRI ACC RED

0
DURING 1977 AND 1978 THE FOLLOWING SOCIEVENTS OCCURRED:
2 GREATER SCHOOL EFFICIENCY EARNS YOUR DISTRICT SD 2,625,000.
8 STUDENT RIOTS COST YOUR DISTRICT SD 4,250,000.

INDICATE BELOW HOW YOU WANT TO EDVERTISE TO CHANGE INFLUENCE AND SATISFACTION LEVELS:
NEO ESS SOC EXP REC HUM BIO

0 3 0 0 0 0 0
EDVERTISING COST YOU SD 1.872 MILLION DURING THIS TWO-YEAR PERIOD.
FOR THIS YOU EARNED AN ADDITIONAL 93.6 SATISFACTION POINTS AND INCREASED INFLUENCE
LEVELS BY 1 POINT.

YOU HAVE BEEN CHARGE SD 937,997 INTEREST FOR OVERDRAWING YOUR ACCOUNT.

THIS TWO-YEAR PLANNING PERIOD HAS NOW ENDED. UNFORTUNATE DECISIONS HAVE COST YOU 899 SATIS-
FACTION POINTS.
TOTAL SATISFACTION POINTS EARNED SINCE 1975 ARE: -230.
YOUR DISTRICT HAS BECOME MORE LIBERAL.
NOTE: THE PROBABILITY OF UNDESIRABLE SOCIEVENTS OCCURRING HAS GONE UP BY 48 POINTS.
NOTE: THE PROBABILITY OF EDVENT FAILURE HAS GONE UP BY 46 POINTS.

YOU ARE NOW LIVING IN THE YEAR 1979. YOUR EDVENT OPTIONS ARE:

2 VOUCHERS
4 AUTHORITARIAN SCHOOLS
5 FAMILY LEARNING CENTER
6 COMMUNITY NURSERY CENTER
7 HOME STUDY PROGRAM
9 COMMUNITY GUIDANCE CENTER
11 INTERACTIONAL CATV SCHOOL

```
    12 INDIVIDUALIZED LEARNING SCHOOL
    13 EDUCATION AS AN OCCUPATION
    14 SOCIETY SCHOOLING
    15 COMMUNITY ARTS CENTERS
    16 FAMILY HEALTH CENTERS

YOUR ACCOUNT HAS JUST BEEN CREDITED WITH SD 12 MILLION FROM TAX REVENUES.
YOUR DISTRICT IS CURRENTLY IN DEBT 7.69794 MILLION.

WHICH EDVENT WOULD YOUR LIKE TO IMPLEMENT THIS YEAR? IF NONE, TYPE 0.

    14
YOU MADEA GOOD, BUT NOT ONE OF THE BEST CHOICES FOR GAINING IMMEDIATE PUBLIC SATISFACTION.
     ANALYSIS RANKS IT 7.
CAUTION: YOU DID NOT MAKE ONE OF THE BEST LONG-RANGE DECISIONS WHEN CONSIDERING SOCIEVENTS.
     ANALYSIS RANKS IT 9.
YOU HAVE MADE A REASONABLE COST-BENEFIT CHOICE, BUT OTHERS WERE BETTER. ANALYSIS RANKS IT 3.

YOUR INNOVATION IS SUCCESSFULLY IMPLEMENTED.

YOUR DISTRICT IS NOW IN DEBT SD 17.1979 MILLION.
IS THERE ANOTHER EDVENT YOU WOULD LIKE TO IMPLEMENT DURING THIS TWO-YEAR PLANNING PERIOD?

    0
INDICATE BELOW HOW YOU WANT TO EDSURE TO CHANGE SOCIEVENT PROBABILITY LEVELS:
     CON  PAR  TEA  STU  PRI  ACC  RED

    1
DURING 1979 AND 1980 THE FOLLOWING SOCIEVENTS OCCURRED:
1 NATIONAL GNP GROWTH EARNS YOUR DISTRICT SD 2,225,000.
7 TEACHER STRIKES COST YOUR DISTRICT SD 4,500,000.

THE FOLLOWING SOCIEVENTS WOULD HAVE OCCURRED IF YOU HAD NOT IMPLEMENTED EDSURANCE PROGRAMS:
9 INFLUX OF NEW STUDENTS COSTS YOUR DISTRICT SD 3,500,000.

INDICATE BELOW HOW YOU WANT TO EDVERTISE TO CHANGE INFLUENCE  AND SATISFACTION LEVELS:
     NEO  ESS  SOC  EXP  REC  HUM  BIO

    0
```

YOU HAVE BEEN CHARGED SD 1.04137 MILLION INTEREST FOR OVERDRAWING YOUR ACCOUNT.

THIS TWO-YEAR PLANNING PERIOD HAS NOW ENDED. YOU EARED 292 SATISFACTION POINTS.
TOTAL SATISFACTION POINTS EARNED SINCE 1975 ARE: 62.
YOUR DISTRICT HAS BECOME MORE CONSERVATIVE.
NOTE: THE PROBABILITY OF UNDESIRABLE SOCIEVENTS OCCURRING HAS GONE UP BY 32 POINTS.
NOTE: THE PROBABILITY OF EDVENT FAILURE HAS GONE UP BY 17 POINTS.

YOU ARE NOW LIVING IN THE YEAR 1981. YOUR EDVENT OPTIONS ARE:

2 VOUCHERS
4 AUTHORITARIAN SCHOOLS
5 FAMILY LEARNING CENTER
6 COMMUNITY NURSERY CENTER
7 HOME STUDY PROGRAM
9 COMMUNITY GUIDANCE CENTER
11 INTERACTIONAL CATV SCHOOL
12 INDIVIDUALIZED LEARNING SCHOOL
13 EDUCATION AS AN OCCUPATION
15 COMMUNITY ARTS CENTERS
16 FAMILY HEALTH CENTERS
17 EDUCATIONAL RESEARCH INSTITUTE
18 STUDENT INFORMATION SERVICE

YOUR ACCOUNT HAS JUST BEEN CREDITED WITH SD 12 MILLION FROM TAX REVENUES.
YOUR DISTRICT IS CURRENTLY IN DEBT 9.86868 MILLION.

WHICH EDVENT WOULD YOU LIKE TO IMPLEMENT THIS YEAR? IF NONE, TYPE 0.

4
YOU MADE A GOOD, BUT NOT ONE OF THE BEST CHOICES FOR GAINING IMMEDIATE PUBLIC SATISFACTION.
ANALYSIS RANKS IT 11.
CAUTION: YOU DID NOT MAKE ONE OF THE BEST LONG-RANGE DECISIONS WHEN CONSIDERING SOCIEVENTS.
ANALYSIS RANKS IT 13.
YOU HAVE MADE A REASONABLE COST-BENEFIT CHOICE, BUT OTHERS WERE BETTER. ANALYSIS RANKS IT 8.

YOUR INNOVATION IS SUCCESSFULLY IMPLEMENTED.

47

YOUR DISTRICT IS NOW IN DEBT SD 13.3687 MILLION.
IS THERE ANOTHER EDVENT YOU WOULD LIKE TO IMPLEMENT DURING THIS TWO-YEAR PLANNING PERIOD?

0
INDICATE BELOW HOW YOU WANT TO EDSURE TO CHANGE SOCIEVENT PROBABILITY LEVELS:
CON PAR TEA STU PRI ACC RED

0
DURING 1981 AND 1982 THE FOLLOWING SOCIEVENTS OCCURRED:
4 GREATER NATIONAL INTEREST EARNS YOUR DISTRICT SD 6,750,000.

INDICATE BELOW HOW YOU WANT TO EDVERTISE TO CHANGE INFLUENCE AND SATISFACTION LEVELS:
NEO ESS SOC EXP REC HUM BIO

0 0 0 10 5 0 0
EDVERTISING COST YOU SD 3.32 MILLION DURING THIS TWO-YEAR PERIOD.
FOR THIS YOU EARNED AN ADDITIONAL 166 POINTS AND INCREASED INFLUENCE LEVELS BY 5 POINTS.

YOU HAVE BEEN CHARGED SD 496,934 INTEREST FOR OVERDRAWING YOUR ACCOUNT.

THIS TWO-YEAR PLANNING PERIOD HAS NOW ENDED. YOU EARNED 414 SATISFACTION POINTS.
TOTAL SATISFACTION POINTS EARNED SINCE 1975 ARE : 476.
YOUR DISTRICT HAS BECOME MORE LIBERAL.
NOTE: THE PROBABILITY OF UNDESIRABLE SOCIEVENTS OCCURRING HAS GONE UP BY 3 POINTS.
NOTE: THE PROBABILITY OF EDVENT FAILURE HAS GONE UP BY 11 POINTS.

YOU ARE NOW LIVING IN THE YEAR 1983. YOUR EDVENT OPTIONS ARE:

2 VOUCHERS
5 FAMILY LEARNING CENTER
6 COMMUNITY NURSERY CENTER
7 HOME STUDY PROGRAM
9 COMMUNITY GUIDANCE CENTER
11 INTERACTIONAL CATV SCHOOL
12 INDIVIDUALIZED LEARNING SCHOOL

13 EDUCATION AS AN OCCUPATION
15 COMMUNITY ARTS CENTERS
16 FAMILY HEALTH CENTERS
17 EDUCATIONAL RESEARCH INSTITUTE
18 STUDENT INFORMATION SERVICE
19 YOUTH TOWNS
20 EDUCATION ASSEMBLY

YOUR ACCOUNT HAS JUST BEEN CREDITED WITH SD 12 MILLION FROM TAX REVENUES.
TOTAL DEPOSITS IN YOUR ACCOUNT NOW ARE SD 1.56438 MILLION.

WHICH EDVENT WOULD YOU LIKE TO IMPLEMENT THIS YEAR? IF NONE, TYPE 0.

5
YOU MADE ONE OF THE BEST POSSIBLE CHOICES FOR GAINING IMMEDIATE PUBLIC SATISFACTION.
CAUTION: YOU DID NOT MAKE ONE OF THE BEST LONG-RANGE DECISIONS WHEN CONSIDERING SOCIEVENTS.
ANALYSIS RANKS IT 6.
YOU HAVE MADE A REASONABLE COST-BENEFIT CHOICE, BUT OTHERS WERE BETTER. ANALYSIS RANKS IT 5.

UNFORTUNATELY, YOUR INNOVATION IS A FAILURE. HALF OF ITS SATISFACTION POINTS ARE LOST.

YOUR DISTRICT IS NOW IN DEBT SD 14.9356 MILLION.
IS THERE ANOTHER EDVENT YOU WOULD LIKE TO IMPLEMENT DURING THIS TWO-YEAR PLANNING PERIOD?

2
UNFORTUNATELY, YOU WILL LIKELY LOSE POINTS BY THE IMPLEMENTATION OF THIS EDVENT.
ANALYSIS RANSK IT 11.
CAUTION: YOU DID NOT MAKE ONE OF THE BEST LONG-RANGE DECISIONS WHEN CONSIDERING SOCIEVENTS.
ANALYSIS RANSK IT 12.
YOU HAVE MADE A REASONABLE COST-BENEFIT CHOICE, BUT OTHERS WERE BETTER. ANALYSIS RANSK IT 12.

YOUR INNOVATION IS SUCCESSFULLY IMPLEMENTED.

YOUR DISTRICT IS NOW IN DEBT SD 27.4356 MILLION.
IS THERE ANOTHER EDVENT YOU WOULD LIKE TO IMPLEMENT DURING THIS TWO-YEAR PLANNING PERIOD?

0
INDICATE BELOW HOW YOU WANT TO EDSURE TO CHANGE SOCIEVENT PROBABILITY LEVELS:
CON PAR TEA STU PRI ACC RED

1
DURING 1983 AND 1984 THE FOLLOWING SOCIEVENTS OCCURRED:

1 NATIONAL GNP GROWTH EARNS YOUR DISTRICT SD 2,225,000.
3 GREATER COMMUNITY INVOLVEMENT EARNS YOURS DISTRICT SD 8,625,000.

THE FOLLOWING SOCIEVENTS WOULD HAVE OCCURRED IF YOU HAD NOT IMPLEMENTED EDSURANCE PROGRAMS:
8 STUDENT RIOTS COST YOUR DISTRICT SD 4,250,000.

INDICATE BELOW HOW YOU WANT TO EDVERTISE TO CHANGE INFLUENCE AND SATISFACTION LEVELS:

NEO	ESS	SOC	EXP	REC	HUM	BIO
0	7	10	0	0	0	0

EDVERTISING COST YOU SD 11.694 MILLION DURING THIS TWO-YEAR PERIOD.
FOR THIS YOU EARNED AN ADDITIONAL 584.7 SATISFACTION POINTS AND INCREASED INFLUENCE LEVELS BY 6 POINTS.
IN COMPARISON TO EDVENTS FOR EARNING POINTS, YOUR EDVERTISING IS RNAKED 3.

YOU HAVE BEEN CHARGED SD 1.48795 MILLION INTEREST FOR OVERDRAWING YOUR ACCOUNT.

THIS TWO-YEAR PLANNING PERIOD HAS NOW ENDED. YOUR EARNED 636 SATISFACTION POINTS.
TOTAL SATISFACTION POINTS EARNED SINCE 1975 ARE: 1112.
YOUR DISTRICT HAS BECOME MORE CONSERVATIVE.
NOTE: THE PROBABILITY OF UNDESIRABLE SOCIEVENTS OCCURRING HAS GONE UP BY 19 POINTS.

CONCLUSION TO THE 1ST TEN-YEAR PLANNING PERIOD

THE TEN-YEAR PLANNING PERIOD HAS NOW ENDED. THE STATUS OF YOUR ACCOUNT IS SD -31.2469 MILLION.
TOTAL SATISFACTION POINTS EARNED IN THE GAME SO FAR ARE: 1112.

THE STATUS OF EVALUATOR INFLUENCE AND SOCIEVENTS IS AS FOLLOWS:

	NEW	OLD	CHANGE
NEO	19	80	-61
ESS	313	320	-7
SOC	371	250	121

50

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EXP    107    110    -3
REC    130    120    10
HUM    78     100    -22
BIO    -12    20     -32

GNP    677    666    11
GRE    54     90     -36
COM    207    220    -13
NAT    257    250    7
CON    92     65     27
PAR    77     95     -18
TEA    161    115    46
STU    149    125    24
PRI    130    120    10
ACC    58     55     3
RED    95     65     30
NUC    30     20     10

ED F   482    400    10

NEW EDSURANCE COSTS NOW ARE:

CON    195,500
PAR    134,750
TEA    362,250
STU    313,625
PRI    227,500
ACC    145,000
RED    296,875
TOTAL COSTS NOW ARE SD 1.6785 MILLION.
THIS IS A CHANGE OF SD 299,125.

TOTAL SATISFACTION POINTS PER MILLION SD INVESTMENT NOW EQUAL: 14.8267.


     COST
THE COST OF PLAYING THIS ROUND OF THE GAME IS 2.83 DOLLARS.
```

APPENDIX B

Tables VI and VII 53

TABLES VI AND VII: CROSS-IMPACT MATRIX OF THE EFFECTS OF EDVENTS ON THE SOCIEVENTS AND THE EDUCATIONAL EVALUATORS

	SOCIEVENTS												EDUCATIONAL EVALUATORS						
EDVENTS	GNP Growth	Greater Efficiency	Community Involvement	National Involvement	Conservative Reaction	Parent Protests	Teacher Strikes	Student Riots	Private School Closure	Accidents	Redirection of Resources	Nuclear War	Neoperennialists	Essentialists	Social Realists	Experimentalists	Social Reconstructionists	Human Potentialists	Biological Reconstructionists
1. Career Education	+1		+1	+2	-1			-2	+2	+1	+1	+1	-1	+2	+1	+1	+1	-1	+1
2. Vouchers	-1	-3	+2	-1	+2	-3	+3	-3	+4		+2		+2	-1	-2	+1	+2	+3	+2
3. Accountability	+1	+6	-1	-1	-4		+3				-2		+1	+2	-3	+1	+3	-2	+3
4. Authoritarian Schools	+1	+3	-1	-3	-4	+2	-2	+4	-4	-2	+2	+2	+1	+2	+1	-3	-2	-3	-1
5. Family Neighborhood Learning Centers	+1		+4	+2		-3		-3	+2				+1	-1	+1	+3	+2	+3	+1
6. Community Nursery Centers	+2		+4	+4		-4	-1		+2		-4		-2	-1	+1	+1	+3	+2	+2
7. Televised Home Study	+1	+3	-2	-2	+2	+1	+3	-2	-2	+1	+1		+3	-1	-2	+1	-1	+2	-1
8. Education as Vocational Training	+2		-2	-2	-2		+4	+3	-4	+2	+4	+2	+1	+1	-2	-2	-2	-1	-1
9. Community Guidance and Evaluation Centers	+1		+4	+2		-3	+2	-2	+2		-2	-1	-2	-1	+1	+1	+2	+3	+2
10. Experiential Learning Schools	-1	-3	+2		+4	+2	+2	-4		+2		-1	+1	-1	-2	-1	+3	+3	+2

TABLES VI AND VII: CROSS-IMPACT MATRIX OF THE EFFECTS OF EDVENTS ON THE SOCIEVENTS AND THE EDUCATIONAL EVALUATORS

EDVENTS	SOCIEVENTS: GNP Growth	Greater Efficiency	Community Involvement	National Involvement	Conservative Reaction	Parent Protests	Teacher Strikes	Student Riots	Private School Closure	Accidents	Redirection of Resources	Nuclear War	EDUCATIONAL EVALUATORS: Neoperennialists	Essentialists	Social Realists	Experimentalists	Social Reconstructionists	Human Potentialists	Biological Reconstructionists
11. Interactional CATV Sch.			+2	+1		-1		-2	+2		-2	-1	+1	-1	-1	-2	+2	+1	+1
12. Individualized Learning Schools		+3	+1	+2		-3	+3	-2	+2				-1	-1	+1	+2	+1	+2	+1
13. Education as an Occupation	+2	+6	+2	+4	-4	+1	-4	-4	+4		-4	+1	-2	+1	+2	-1	-1	-1	+1
14. Society Schooling	-1	-3	+2	+2	+4	-1		-2					-2	-1	+1	+3	+1	+2	+1
15. Community Arts Center	-1		+4	+2	+2	-3	+2	-2	+2		-2		+1	-1	+1	+2	+2	+2	+1
16. Family Health Center	+1		+4	+4		-5	+2	-2	+2	-3	-4		+1	+1	-1	+2	+2	+2	+1
17. Education Research Institute	+1	+6	+1	+3	-1		-2			-3	-4		-2	-1	+1	+2	+3	-1	+2
18. Student Information Service		+3	+1	+2	-2	+5	-2	+5	-4	-2	-2		-3	+1	+2	-2	+2	-3	+3
19. Youth Towns	+1	+2	+2	+3	+2	+4	+5	-4	-3	+2	-2		-3	-1	-2	+3	+2	+1	+1
20. Education Assembly			+4	-2		-4	-2				-4	-1	+1	-1	-2	+2	+2	+2	+2

TABLES VI AND VII: CROSS-IMPACT MATRIX OF THE EFFECTS OF EDVENTS ON THE SOCIEVENTS AND THE EDUCATIONAL EVALUATORS

EDVENTS	SOCIEVENTS: GNP Growth	Greater Efficiency	Community Involvement	National Involvement	Conservative Reaction	Parent Protests	Teacher Strikes	Student Riots	Private School Closure	Accidents	Redirection of Resources	Nuclear War	EDUCATIONAL EVALUATORS: Neoperennialists	Essentialists	Social Realists	Experimentalists	Social Reconstructionists	Human Potentialists	Biological Reconstructionists
21. National Library Service	+1	+3	+2	+4		-2	+3	-2	-2			-1	+1	-1	-1	+2	+1	+2	+1
22. Educational Experience Centers	-1	-3	+2	+2	+6	+4	+4	-4	-2	+4	-2	-1	-3	-2	+1	+3	+2	+2	+2
23. Performance Contracting		+4	-2	+2	-2		+4		-2		-2	+1	+1	+2	-2	-1	+2	-2	+1
24. Community Siblings Program		+3	+1			+3	+1	-2					-3	-2	+1	+1	+2	-1	+2
25. Future-Shock Curricula	+1	+2	+1	+4	+4	+2		-2	+2	+3	-2	-2	-3	-2	+1	+2	+3	+1	+2
26. Differential Staffing		+3	-2				+2		+1				-1	+2	-1	+1	+2	-2	+2
27. Parochiaid		-2	+2	-4	-4				-4		+4	+4	+3	+1	-1	-2	-2	-1	-2
28. Marriage Training Schools	+1	+2	+1		+4	+4		-4	-2				-3	-1	+1	+2	+2	+2	+2
29. Intelligence Drugs	+2	+4	-2	-4	-4	+2	+2	-2	-2	+6	+2	-1	-2	-1	-1	+1	+3	-1	+3
30. Personality Drugs	+2	+4	-2	-4	-4	+4	-4	+4	-4	+6	+4	+1	-3	+1	+1	-1	+2	-2	+3

TABLES VI AND VII: CROSS-IMPACT MATRIX OF THE EFFECTS OF EDVENTS ON THE SOCIEVENTS AND THE EDUCATIONAL EVALUATORS

EDVENTS	SOCIEVENTS: GNP Growth	Greater Efficiency	Community Involvement	National Involvement	Conservative Reaction	Parent Protests	Teacher Strikes	Student Riots	Private School Closure	Accidents	Redirection of Resources	Nuclear War	EDUCATIONAL EVALUATORS: Neoperennialists	Essentialists	Social Realists	Experimentalists	Social Reconstructionists	Human Potentialists	Biological Reconstructionists
31. Family Centered Education	-1	-6	-4	-2	+3	+2	+6		-4		+4	+2	+3	+1	-2	-1	-2	+1	-2
32. Incidental Education	-2	-6	-4	+1	+6	+4	+6	-4	-4	+4	+4	+1	+1	-1	-2	-1	-2	+3	-2
33. Professional Parenthood Schools			+2	+2	-2		+1		-2		-4		-3	-1	+1	+1	+2	+1	+2
34. Schools of Relearning	+2	+3	+2	+2	-4	+2	-4	+6	-4	+4	-2		-3	+1	+2	-1	+2	-3	+3
35. Education Quotas				+1	+2	+4	+2	+4	-4		-2	-1	-1	-1	-2	+2	+3	-1	+1
36. Computerized Schools	+1	+6	-2	-2	-2	+4	+6	+6	-2		+4		+3	+1	-2	-1	-2	+2	+2
37. Advanced Sex Education					+4	+4		-4	-2				-3	-1	+1	+1	+2	+1	+2
38. Education for World Democracy		-2	-2	+2	+2	+2	+4	-2	+2	+4	-2	-4	-2	-1	+1	+2	+3	+1	+1
39. Charter Myth Schools	+1	+2	+2	+4	+2	+1		-1	-2		-2	+1	-2	+1	-1	-3	+3	-2	+2
40. Education Centralization	+2	+6	-2	+4	-4		+3		+4	-2	-4		-2	+1	-1	+1	+2	-3	+2

TABLES VI AND VII: CROSS-IMPACT MATRIX OF THE EFFECTS OF EDVENTS ON THE SOCIEVENTS AND THE EDUCATIONAL EVALUATORS

EDVENTS	SOCIEVENTS: GNP Growth	Greater Efficiency	Community Involvement	National Involvement	Conservative Reaction	Parent Protests	Teacher Strikes	Student Riots	Private School Closure	Accidents	Redirection of Resources	Nuclear War	EDUCATIONAL EVALUATORS: Neoperennialists	Essentialists	Social Realists	Experimentalists	Social Reconstructionists	Human Potentialists	Biological Reconstructionists
41. Education for Space Travel			+2	+4	-2			-4	+4	+6	-2		-2	+1	+1	+2	-1	+2	+2
42. World Government Education			-4	+2	+2	+2	+2	-2	-2		+2	-6	-1	-1	-2	+2	+3	+1	-1
43. World Language Education		+2	-2	+2		+4	+4	+4	-4		-2	-4	-2	-1	+1	+2	+3	-1	+1
44. Community Happiness Centers	+1	+2	+3	+2	+4	-2			+2		-2	-1	+2	+1	-1	-1	+1	-1	+1
45. School Supersleep	+4		+4	+2	-2				+1		-2	+2	-2	-1	+2	+1	+2	-1	+2
46. Genetic Engineering Education	+2		+1	+2	-1					+1	-1	+1	-2	-1	+1	+1	+2	-1	+3
47. Intelligent Robot Tutors	+2	+4	+2	+1		-2	+4	-4	+4	+4	+1	+1	+1	-1	-2	+2	+2	-1	+2
48. Babytorium Education			+1	+1	+2	-2					-1		-2	-1	+1	+1	+2	-1	+1
49. Educating the Clones	+2		-2	-4	+2	+4	+2	+6	-4	+2	-1	+1	-2	+1	-1	-2	+1	-3	+3
50. School Superfood	+2	+3	+2	+2						+4	-1		-2	+1	+1	+1	+2	-1	+3

TABLES VI AND VII: CROSS-IMPACT MATRIX OF THE EFFECTS OF EDVENTS ON THE SOCIEVENTS AND THE EDUCATIONAL EVALUATORS

EDVENTS	SOCIEVENTS												EDUCATIONAL EVALUATORS						
	GNP Growth	Greater Efficiency	Community Involvement	National Involvement	Conservative Reaction	Parent Protests	Teacher Strikes	Student Riots	Private School Closure	Accidents	Redirection of Resources	Nuclear War	Neoperennialists	Essentialists	Social Realists	Experimentalists	Social Reconstructionists	Human Potentialists	Biological Reconstructionists
51. Advanced Personality Drugs	+2	+6	+1	-2	+2	+2	-4	+4	-4	+6	+2	+1	-3	-1	+1	-1	+2	-3	+3
52. Schools for Participatory Democracy	-2		+2	+1	-6	-2			+2	-4	-4	-1	+1	-1	+2	+3	+2	+1	+1
53. Supercontrolled Environments	-1	+1	+2	+2			+2	-2	+4	+4	-1	-1	-1	-1	+2	+3	+2	+2	+2
54. Education for Suspended Animation	-2		+2	+1	+1		+2	-2	+2	+6			-1	-1	+1	+2	-1	+2	+1
55. Instantaneous Education	+4	+6	-2	-6	-3	-2	+6	-4	+2	+6	+6	-2	-2	-1	-2	+1	+2	+1	+3
56. Mental Telepathy Education	+1	+2			+2		+2	-2		+2		-1	-1	-1	-1	+2	+2	+3	+2
57. Education Orgasms	+1	+4	-1	-2	+4	+1	-4	+4	+4	+6		-1	-3	-1	+2	-1	+2	-2	+3
58. Automated Childhood	+2	+6	-2	-2	+1	+6	-4	+6	-4	+6	+2	+1	-3	-1	+1	-2	+2	-3	+3
59. World Reconstructionist Education	+1		-1	+4	+2	+2					-4	-6	-2	-1	+1	+2	+3	-2	+1
60. Education for Immortality	+2	-6	-6	-6	+2	+4	+6	-6	+6	+6	+6	+6	-3	+1	-2	-1	+1	-1	+3

APPENDIX C

Flowchart of the entire game

SAFE 60

VALUES 73

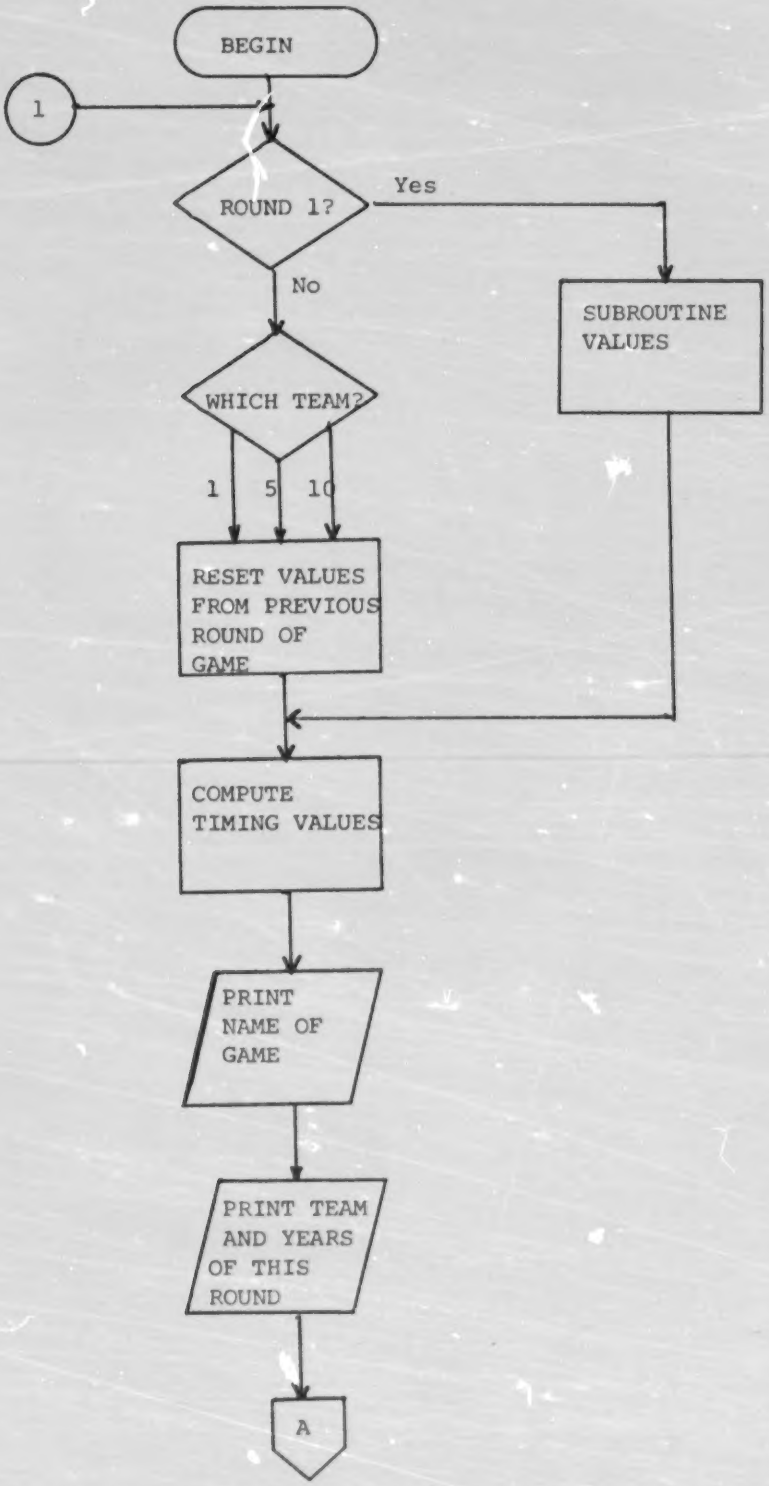
INSURE 74

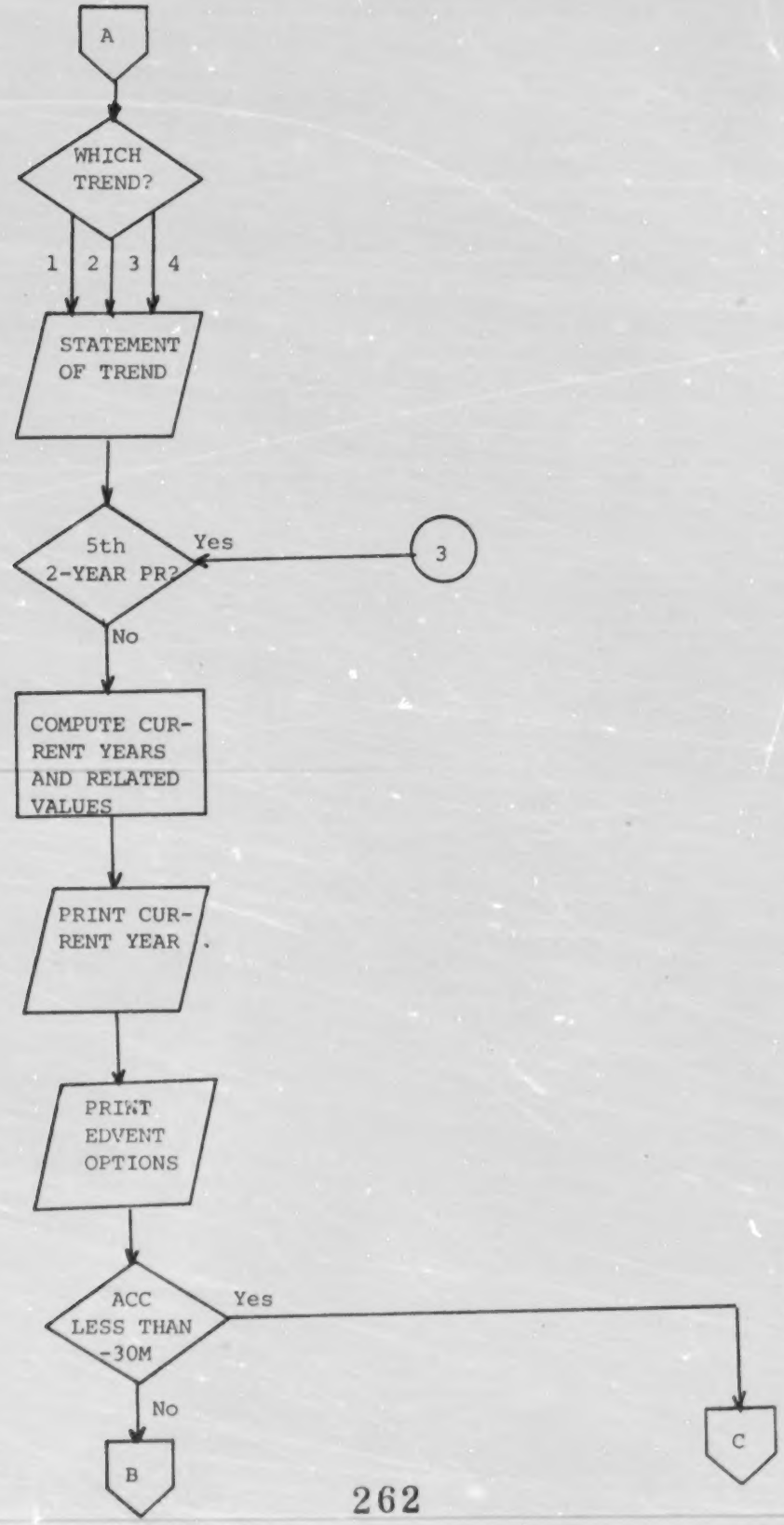
REVOLUTION 75

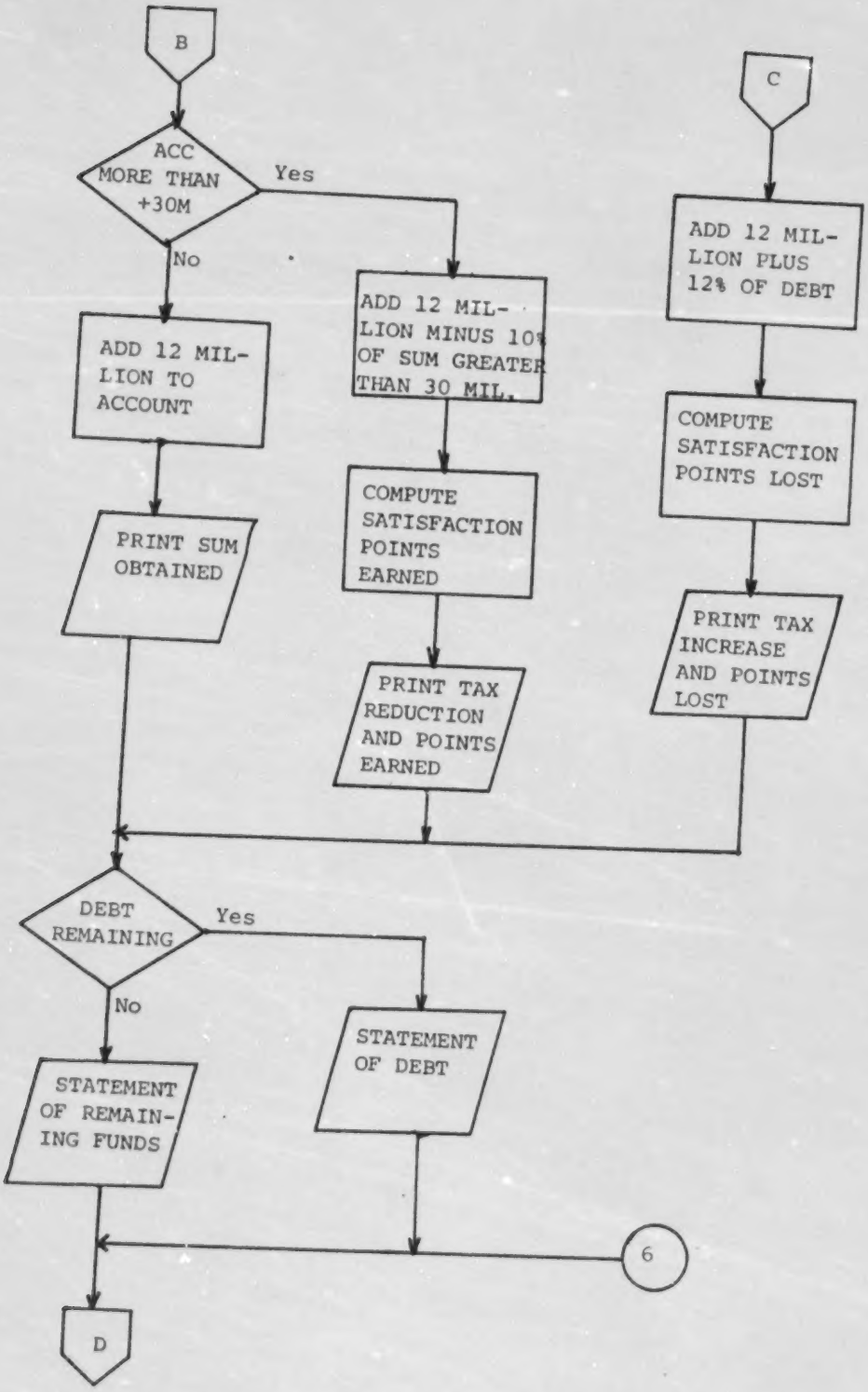
STATUS 76

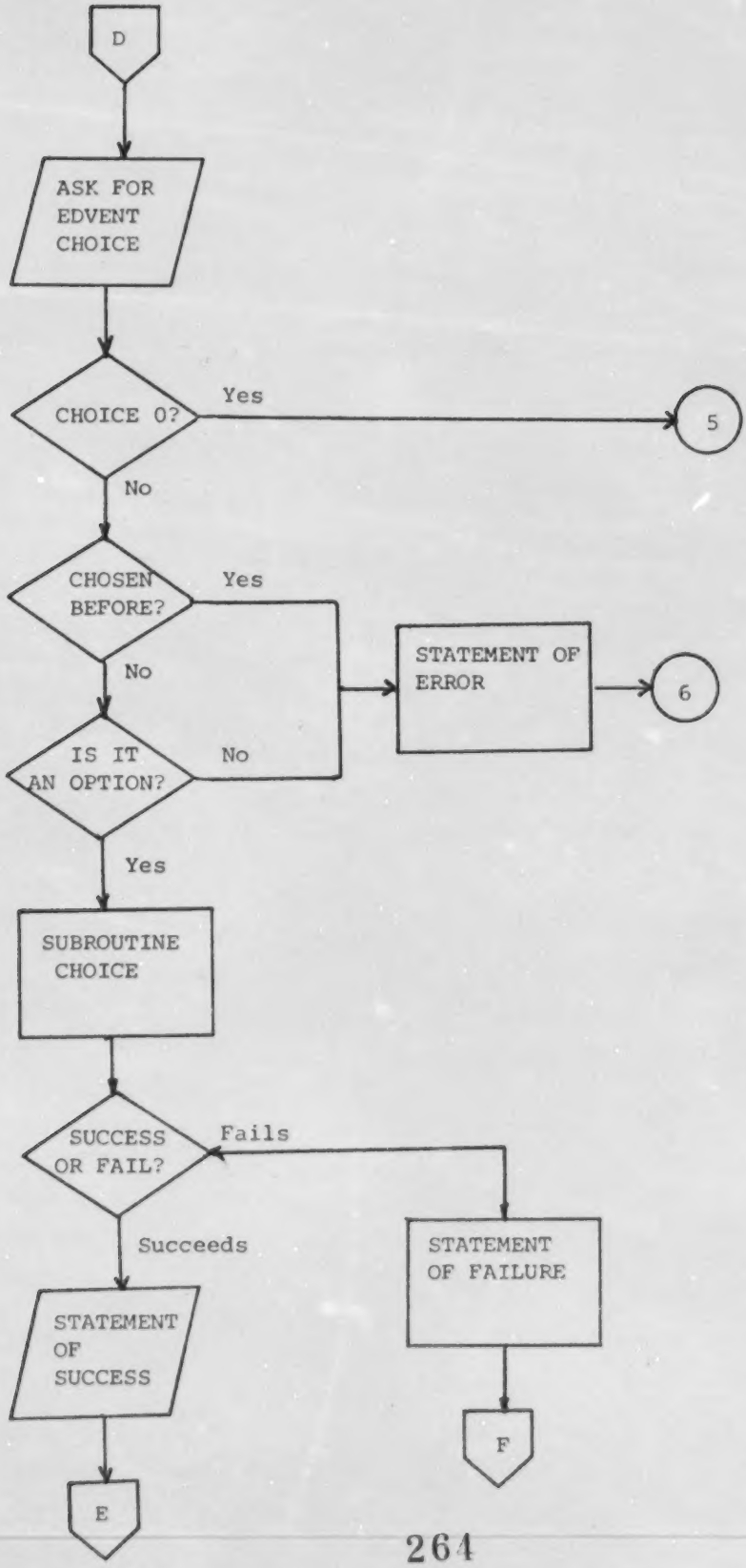
CHOICE 77

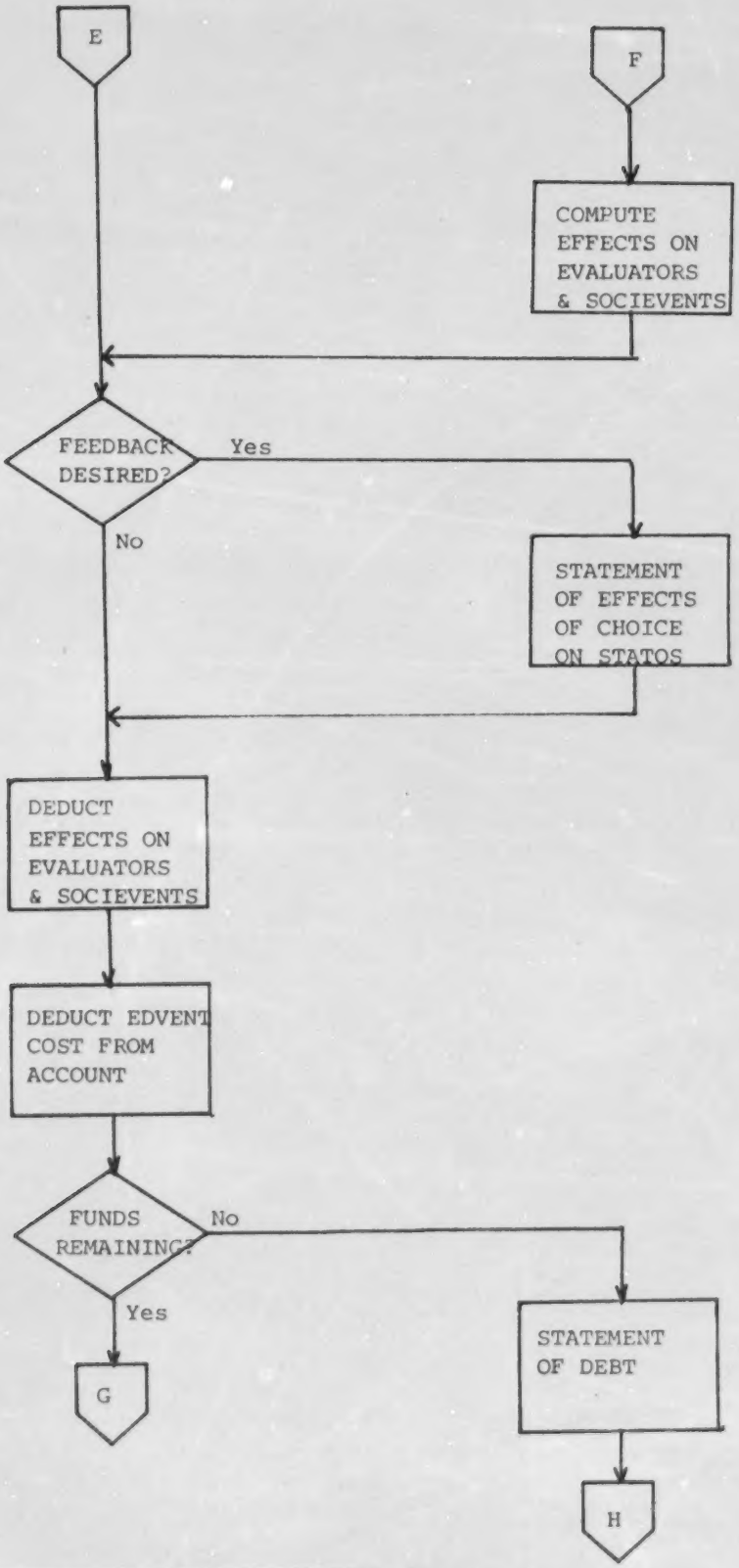
SAFE: Flowchart of the computerized version of the game.

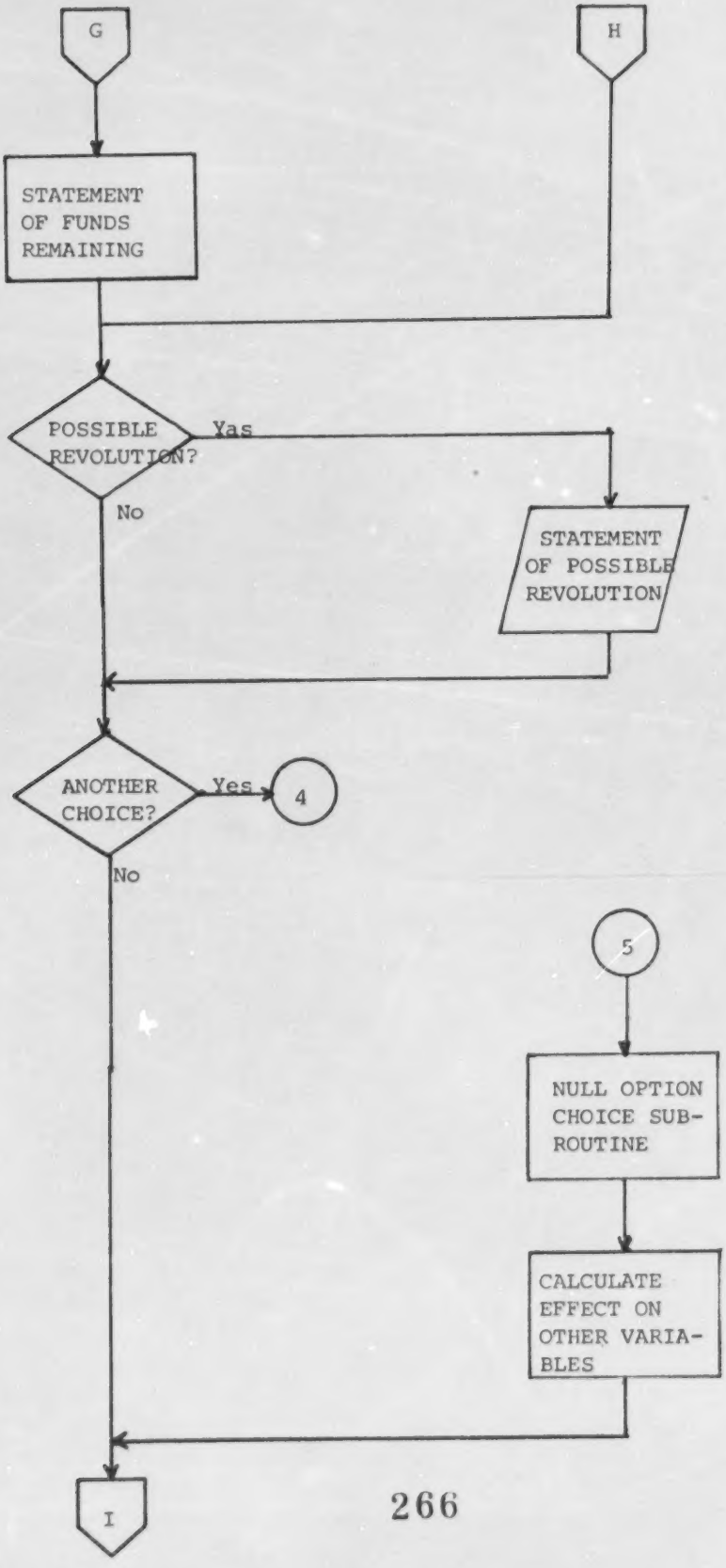


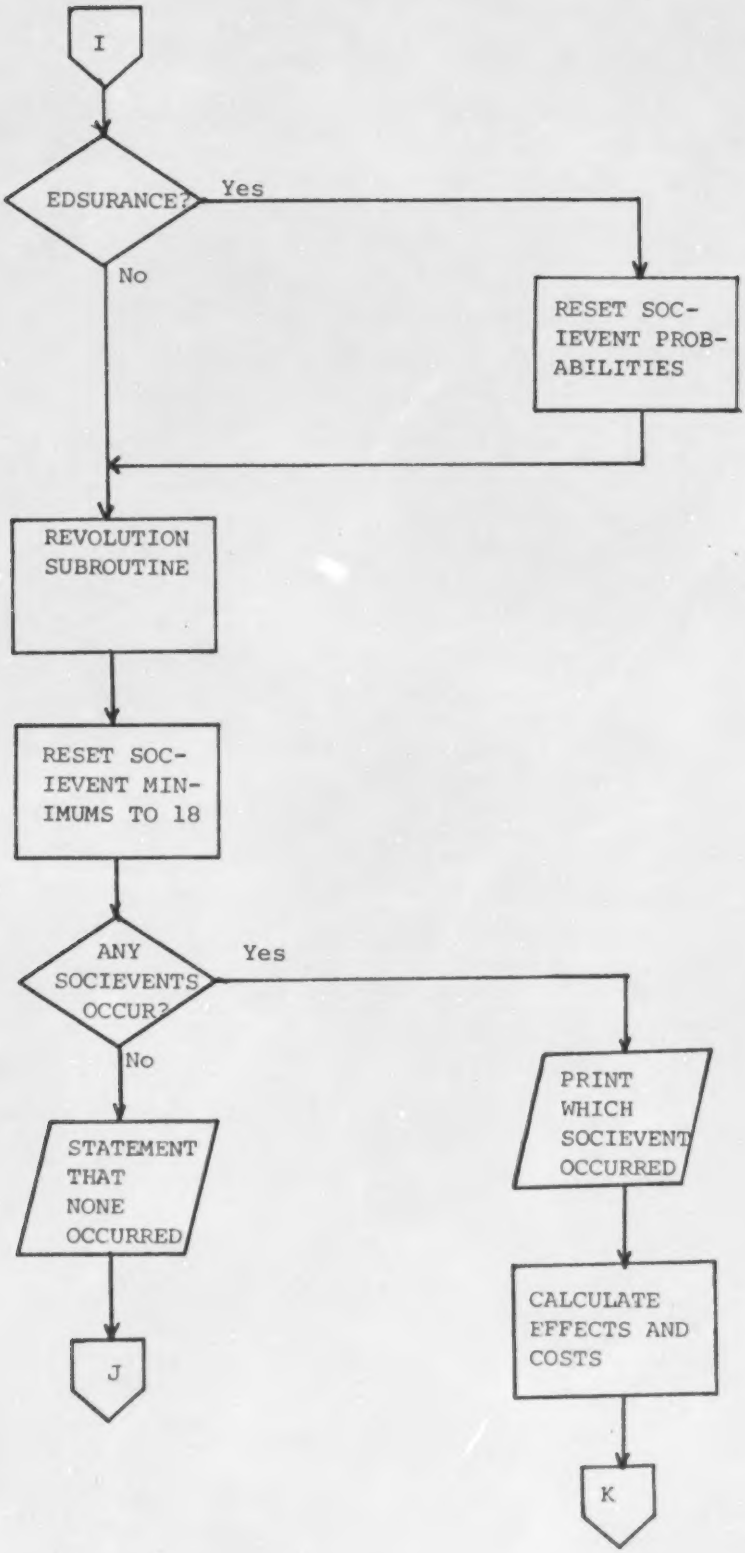

A
WHICH TREND?
1
2
3
4
STATEMENT OF TREND
5th 2-YEAR PR?
Yes
3
No
COMPUTE CURRENT YEARS AND RELATED VALUES
PRINT CURRENT YEAR
PRINT EDVENT OPTIONS
ACC LESS THAN -30M
Yes
No
B
C

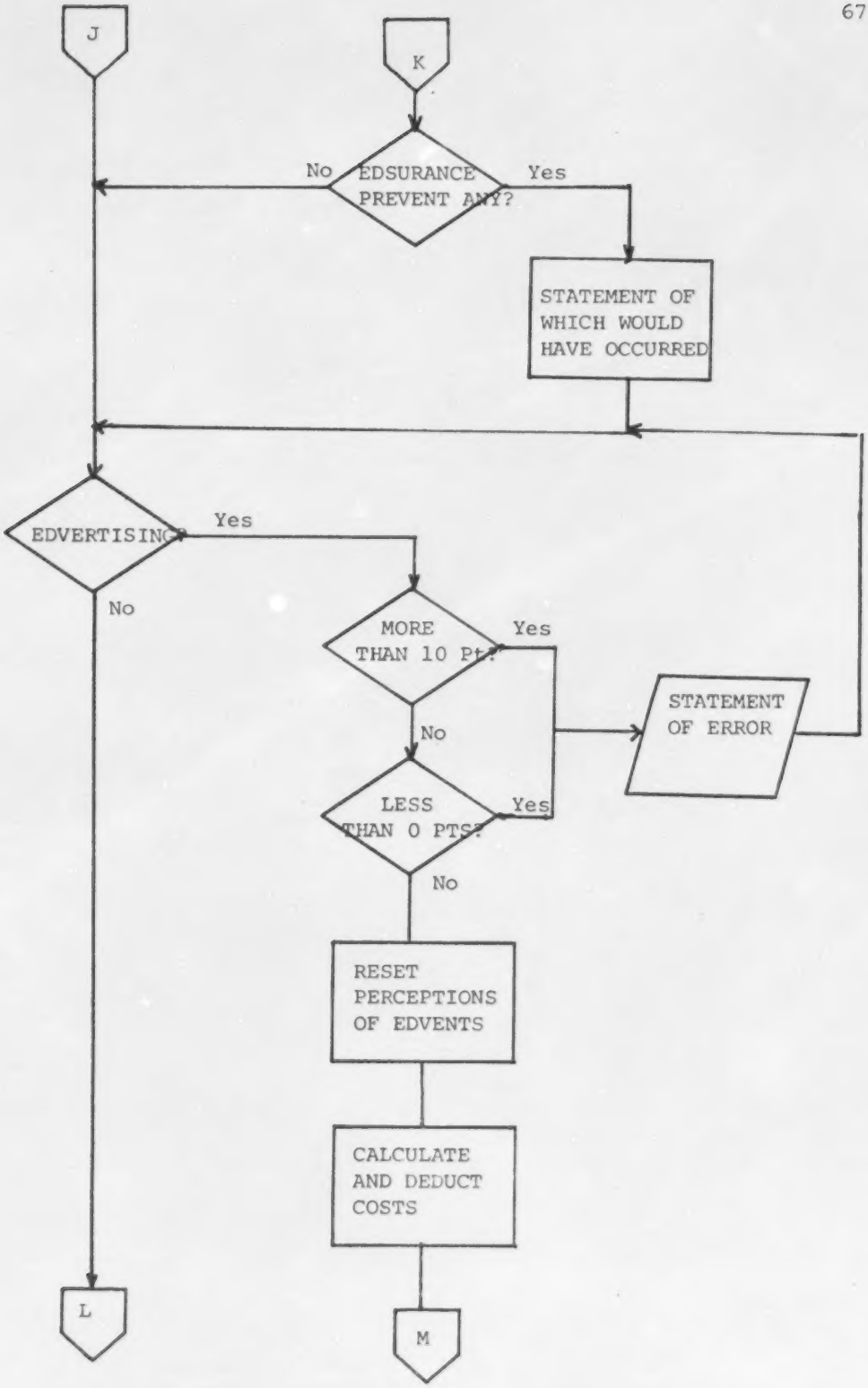

B
ACC MORE THAN +30M
Yes
No
ADD 12 MIL-LION TO ACCOUNT
PRINT SUM OBTAINED
ADD 12 MIL-LION MINUS 10% OF SUM GREATER THAN 30 MIL.
COMPUTE SATISFACTION POINTS EARNED
PRINT TAX REDUCTION AND POINTS EARNED
C
ADD 12 MIL-LION PLUS 12% OF DEBT
COMPUTE SATISFACTION POINTS LOST
PRINT TAX INCREASE AND POINTS LOST
DEBT REMAINING
Yes
No
STATEMENT OF DEBT
STATEMENT OF REMAIN-ING FUNDS
6
D

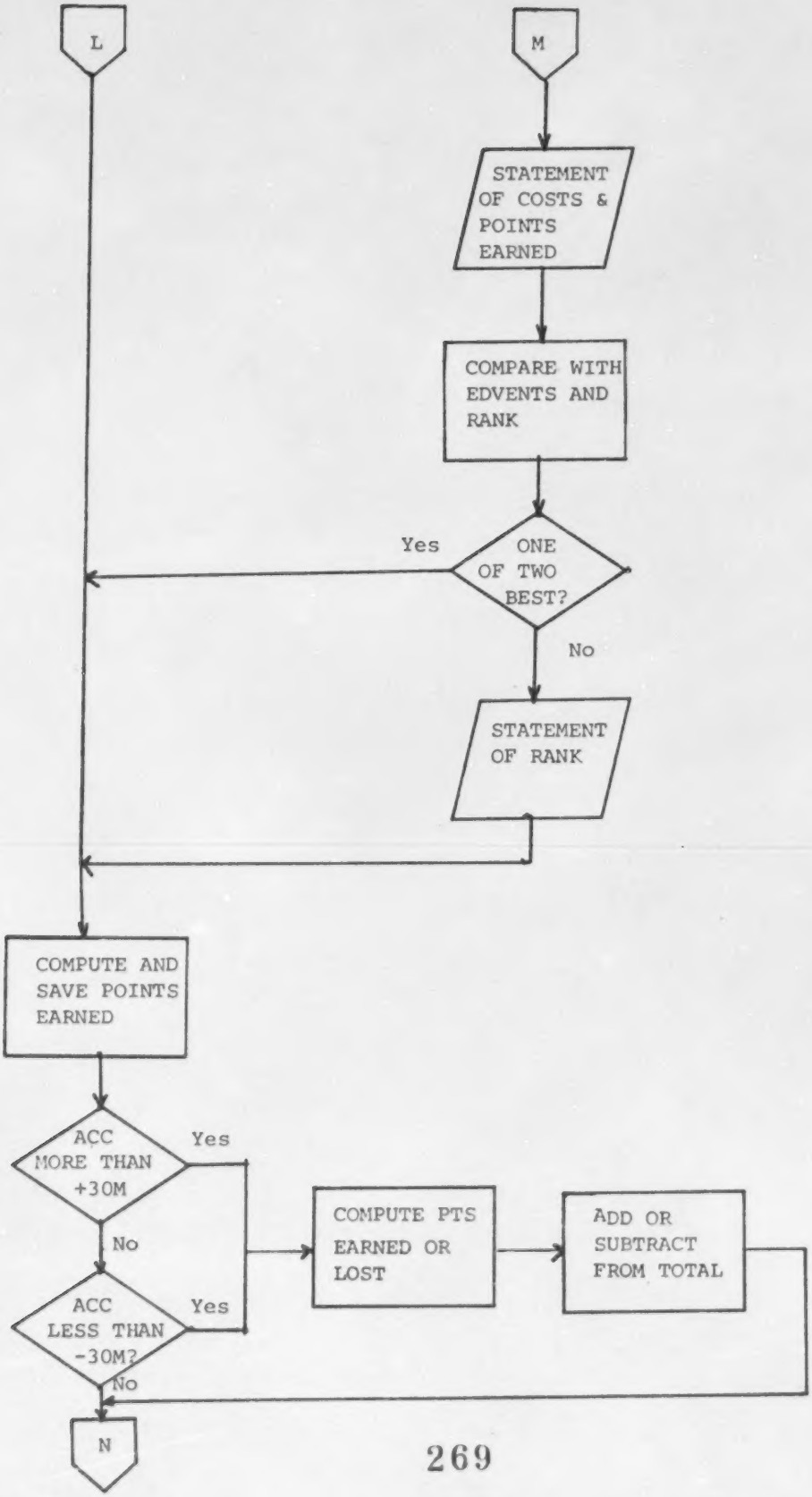

D
ASK FOR EDVENT CHOICE
CHOICE 0?
Yes
5
No
CHOSEN BEFORE?
Yes
No
STATEMENT OF ERROR
6
IS IT AN OPTION?
No
Yes
SUBROUTINE CHOICE
SUCCESS OR FAIL?
Fails
Succeeds
STATEMENT OF SUCCESS
STATEMENT OF FAILURE
F
E

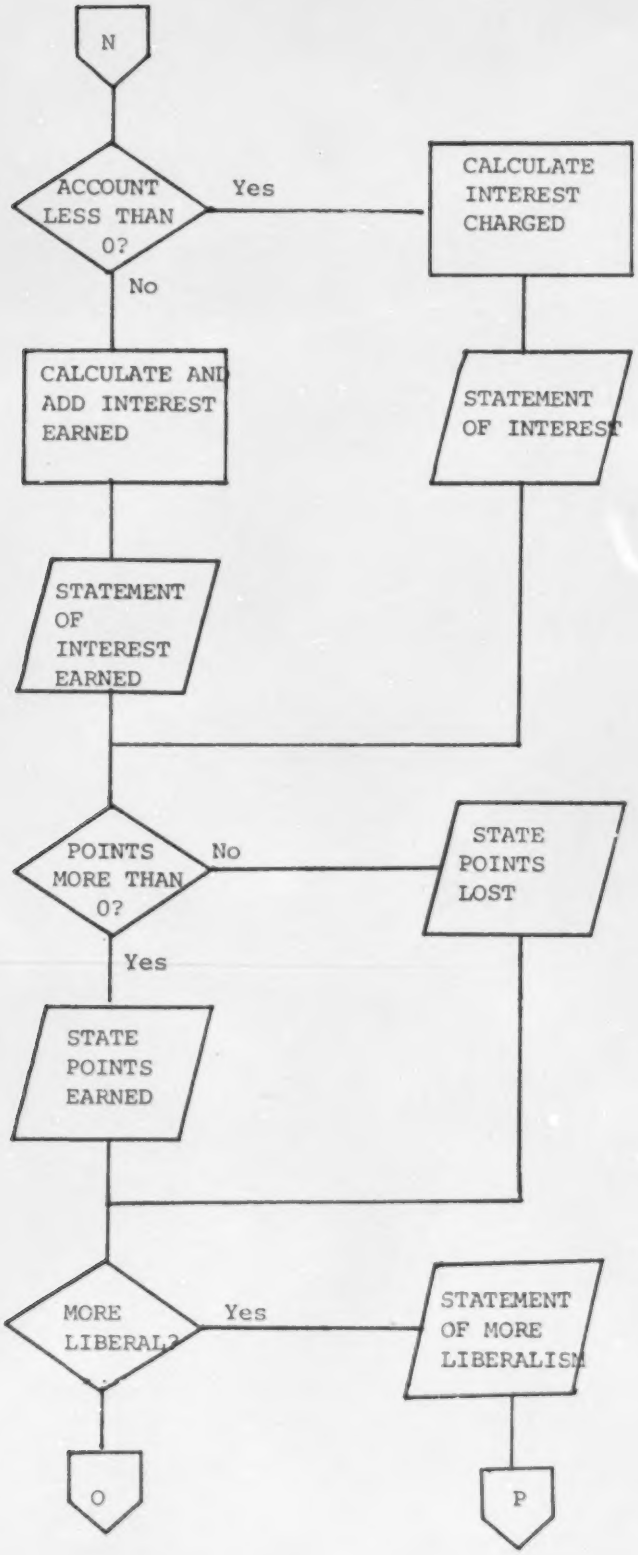

E
F
COMPUTE EFFECTS ON EVALUATORS & SOCIEVENTS
FEEDBACK DESIRED?
Yes
No
STATEMENT OF EFFECTS OF CHOICE ON STATOS
DEDUCT EFFECTS ON EVALUATORS & SOCIEVENTS
DEDUCT EDVENT COST FROM ACCOUNT
FUNDS REMAINING?
No
Yes
G
STATEMENT OF DEBT
H

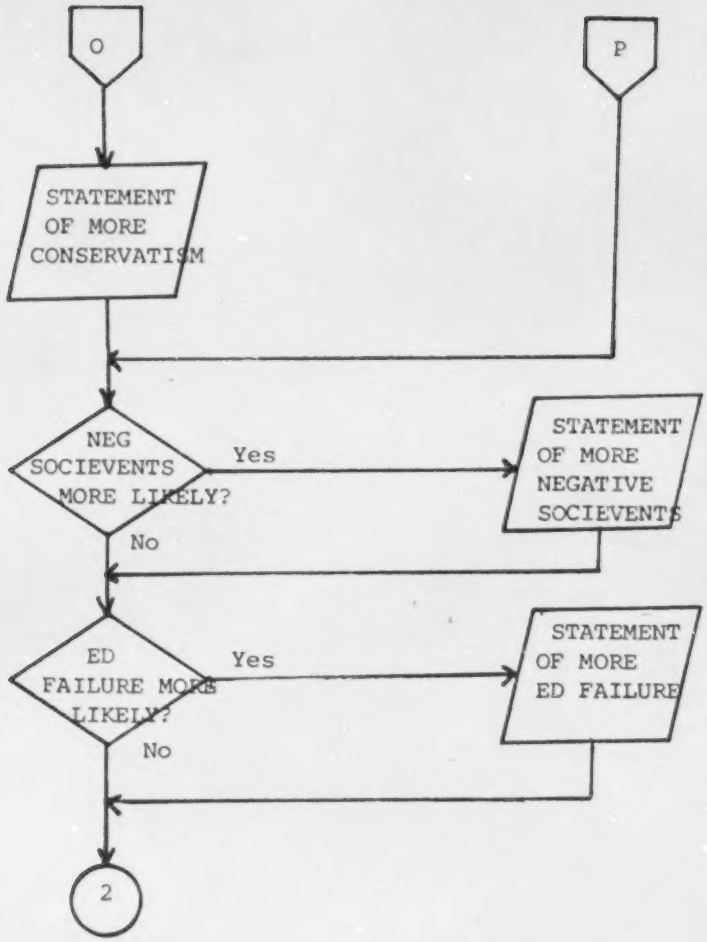

G
H
STATEMENT OF FUNDS REMAINING
POSSIBLE REVOLUTION?
Yes
No
STATEMENT OF POSSIBLE REVOLUTION
ANOTHER CHOICE?
Yes
4
No
5
NULL OPTION CHOICE SUB-ROUTINE
CALCULATE EFFECT ON OTHER VARIA-BLES
I

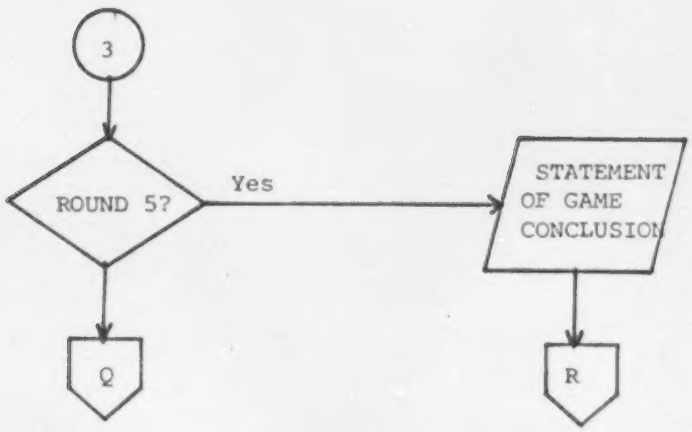

I
EDSURANCE?
Yes
No
RESET SOC-IEVENT PROB-ABILITIES
REVOLUTION SUBROUTINE
RESET SOC-IEVENT MIN-IMUMS TO 18
ANY SOCIEVENTS OCCUR?
Yes
No
PRINT WHICH SOCIEVENT OCCURRED
STATEMENT THAT NONE OCCURRED
CALCULATE EFFECTS AND COSTS
J
K

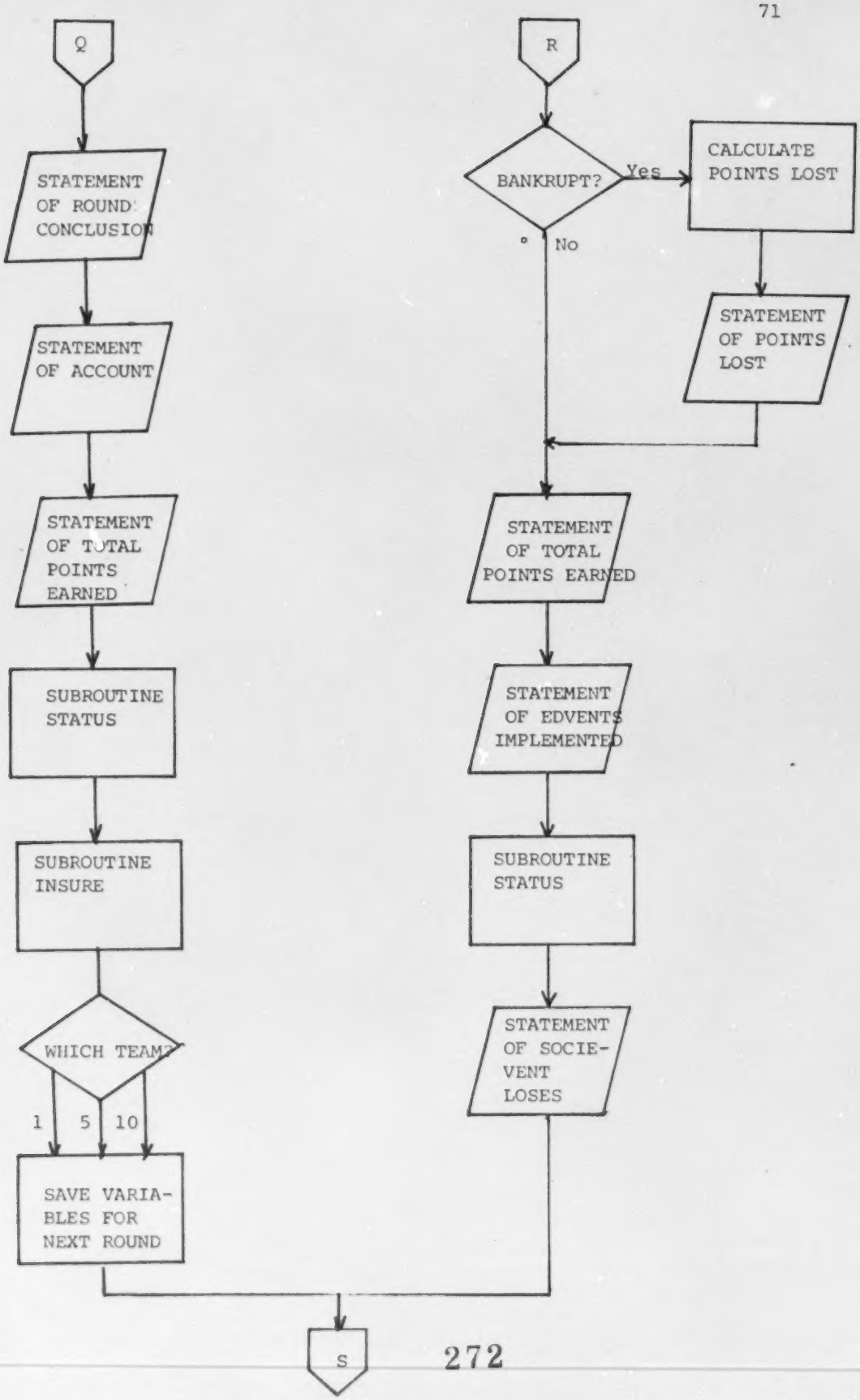

J
K
No
EDSURANCE PREVENT ANY?
Yes
STATEMENT OF WHICH WOULD HAVE OCCURRED
EDVERTISING?
Yes
No
MORE THAN 10 Pt?
Yes
No
LESS THAN 0 PTS?
Yes
No
STATEMENT OF ERROR
RESET PERCEPTIONS OF EDVENTS
CALCULATE AND DEDUCT COSTS
L
M

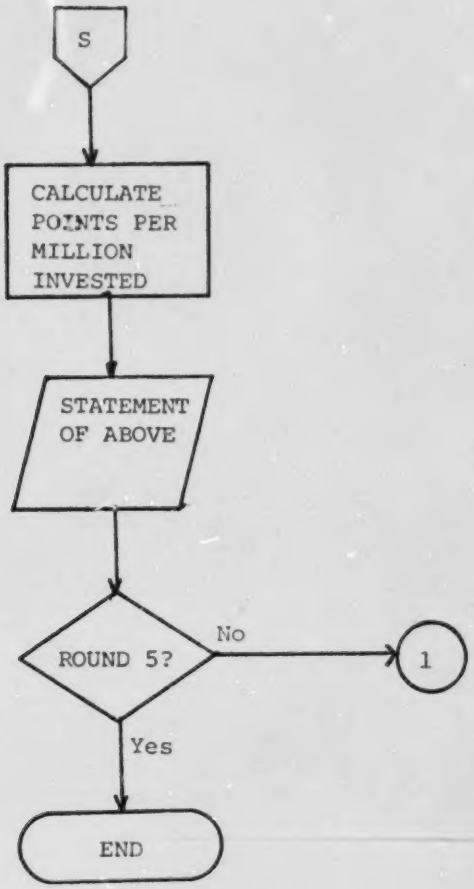

L
M
STATEMENT OF COSTS & POINTS EARNED
COMPARE WITH EDVENTS AND RANK
Yes
ONE OF TWO BEST?
No
STATEMENT OF RANK
COMPUTE AND SAVE POINTS EARNED
ACC MORE THAN +30M
Yes
No
ACC LESS THAN -30M?
Yes
No
COMPUTE PTS EARNED OR LOST
ADD OR SUBTRACT FROM TOTAL
N


N
ACCOUNT LESS THAN 0?
Yes
CALCULATE INTEREST CHARGED
No
CALCULATE AND ADD INTEREST EARNED
STATEMENT OF INTEREST
STATEMENT OF INTEREST EARNED
POINTS MORE THAN 0?
No
STATE POINTS LOST
Yes
STATE POINTS EARNED
MORE LIBERAL?
Yes
STATEMENT OF MORE LIBERALISM
O
P

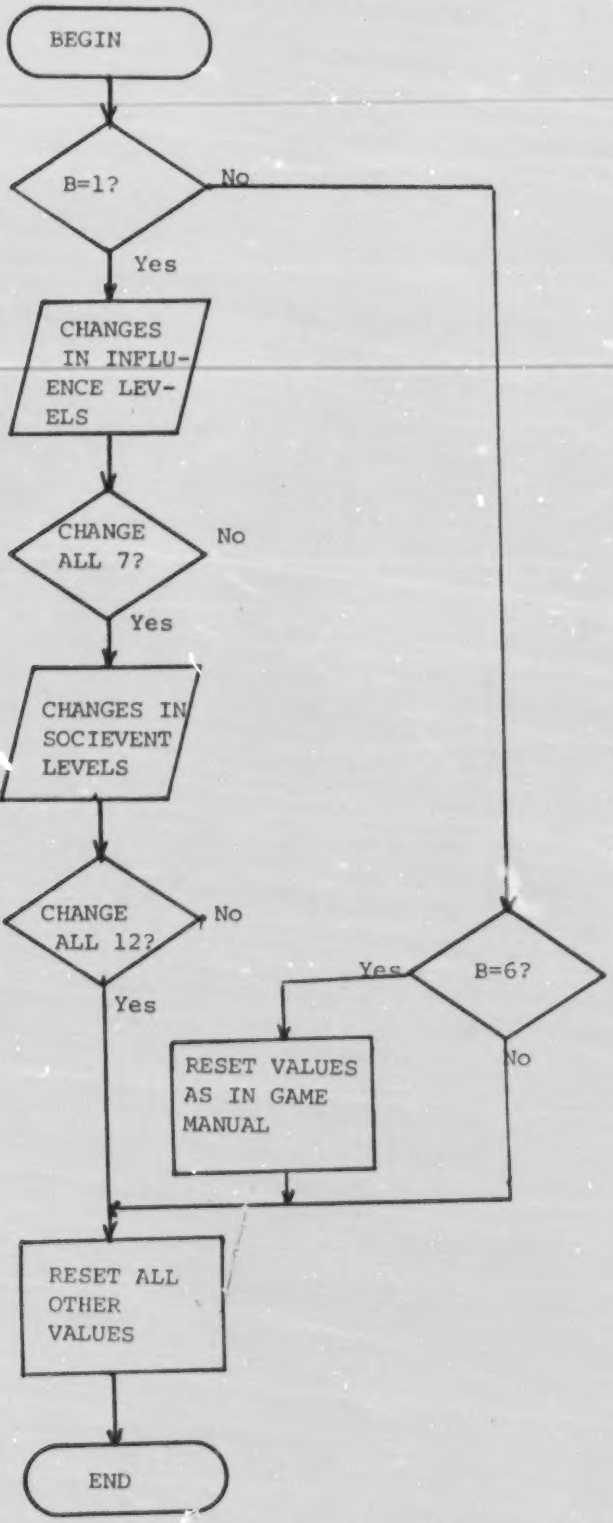

O
P
STATEMENT OF MORE CONSERVATISM
NEG SOCIEVENTS MORE LIKELY?
Yes
STATEMENT OF MORE NEGATIVE SOCIEVENTS
No
ED FAILURE MORE LIKELY?
Yes
STATEMENT OF MORE ED FAILURE
No
2


3
ROUND 5?
Yes
STATEMENT OF GAME CONCLUSION
Q
R

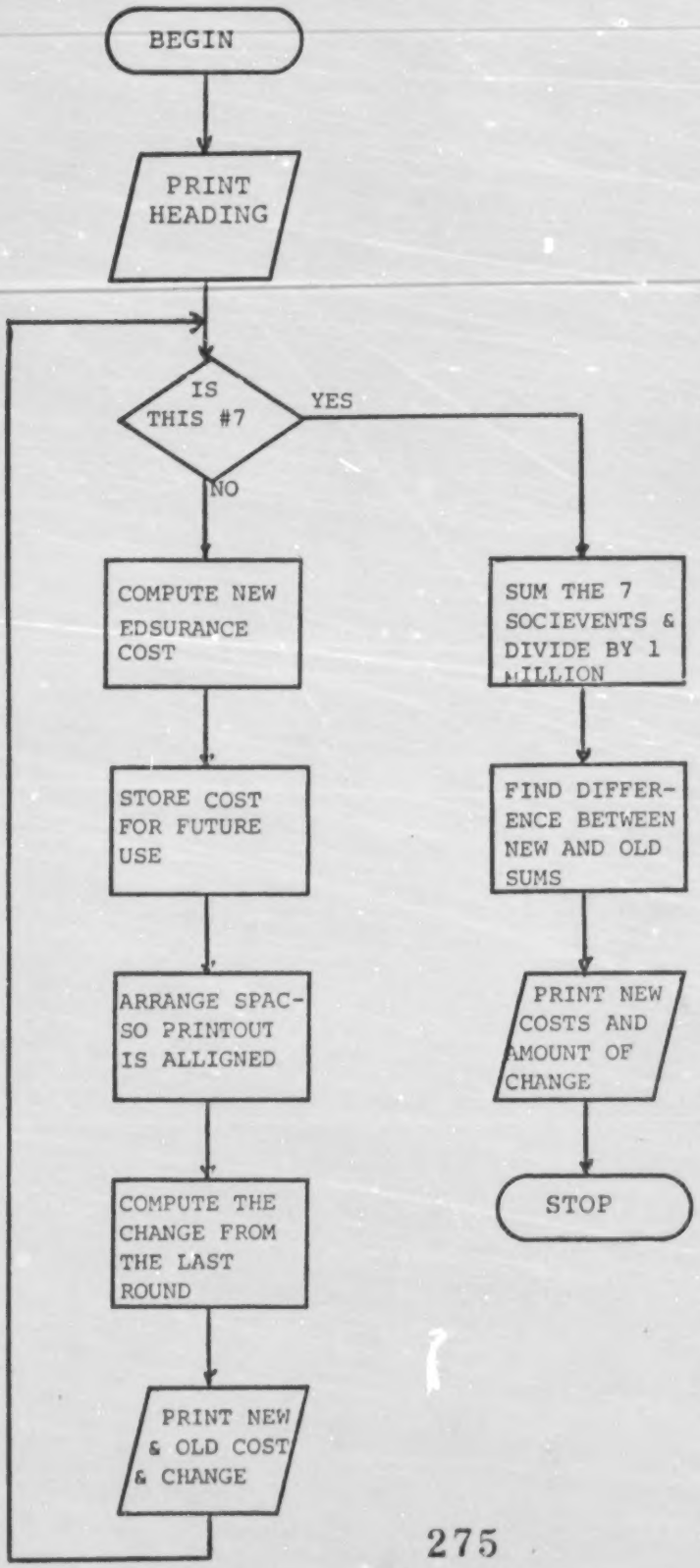

Q
STATEMENT OF ROUND CONCLUSION
STATEMENT OF ACCOUNT
STATEMENT OF TOTAL POINTS EARNED
SUBROUTINE STATUS
SUBROUTINE INSURE
WHICH TEAM?
1
5
10
SAVE VARIABLES FOR NEXT ROUND
R
BANKRUPT?
Yes
No
CALCULATE POINTS LOST
STATEMENT OF POINTS LOST
STATEMENT OF TOTAL POINTS EARNED
STATEMENT OF EDVENTS IMPLEMENTED
SUBROUTINE STATUS
STATEMENT OF SOCIE-VENT LOSES
S


S
CALCULATE POINTS PER MILLION INVESTED
STATEMENT OF ABOVE
ROUND 5?
No
1
Yes
END

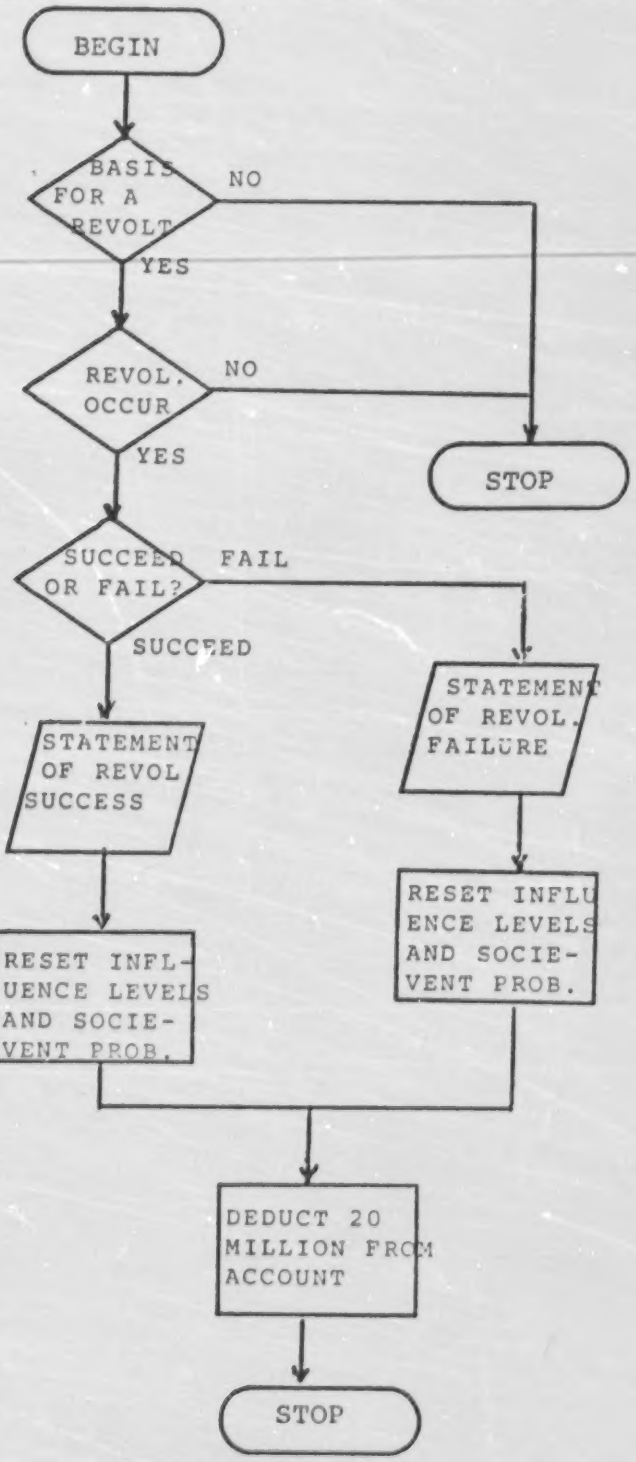
VALUES: Subroutine to reset all game values. 73



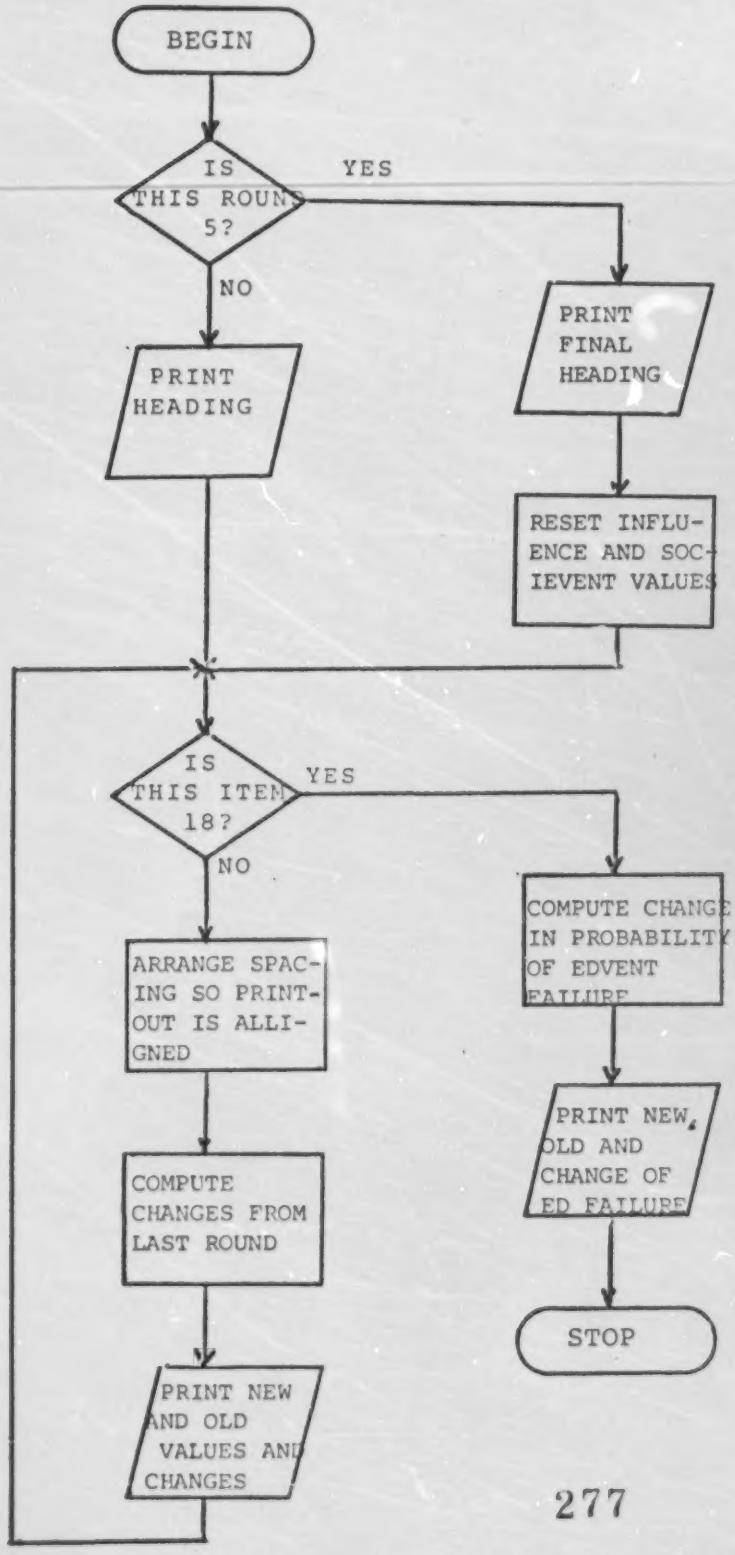
INSURE: Subroutine to determine and inform game participants of the new costs of edsurance.


BEGIN
PRINT HEADING
IS THIS #7
YES
NO
COMPUTE NEW EDSURANCE COST
STORE COST FOR FUTURE USE
ARRANGE SPAC-SO PRINTOUT IS ALLIGNED
COMPUTE THE CHANGE FROM THE LAST ROUND
PRINT NEW & OLD COST & CHANGE
SUM THE 7 SOCIEVENTS & DIVIDE BY 1 MILLION
FIND DIFFER-ENCE BETWEEN NEW AND OLD SUMS
PRINT NEW COSTS AND AMOUNT OF CHANGE
STOP

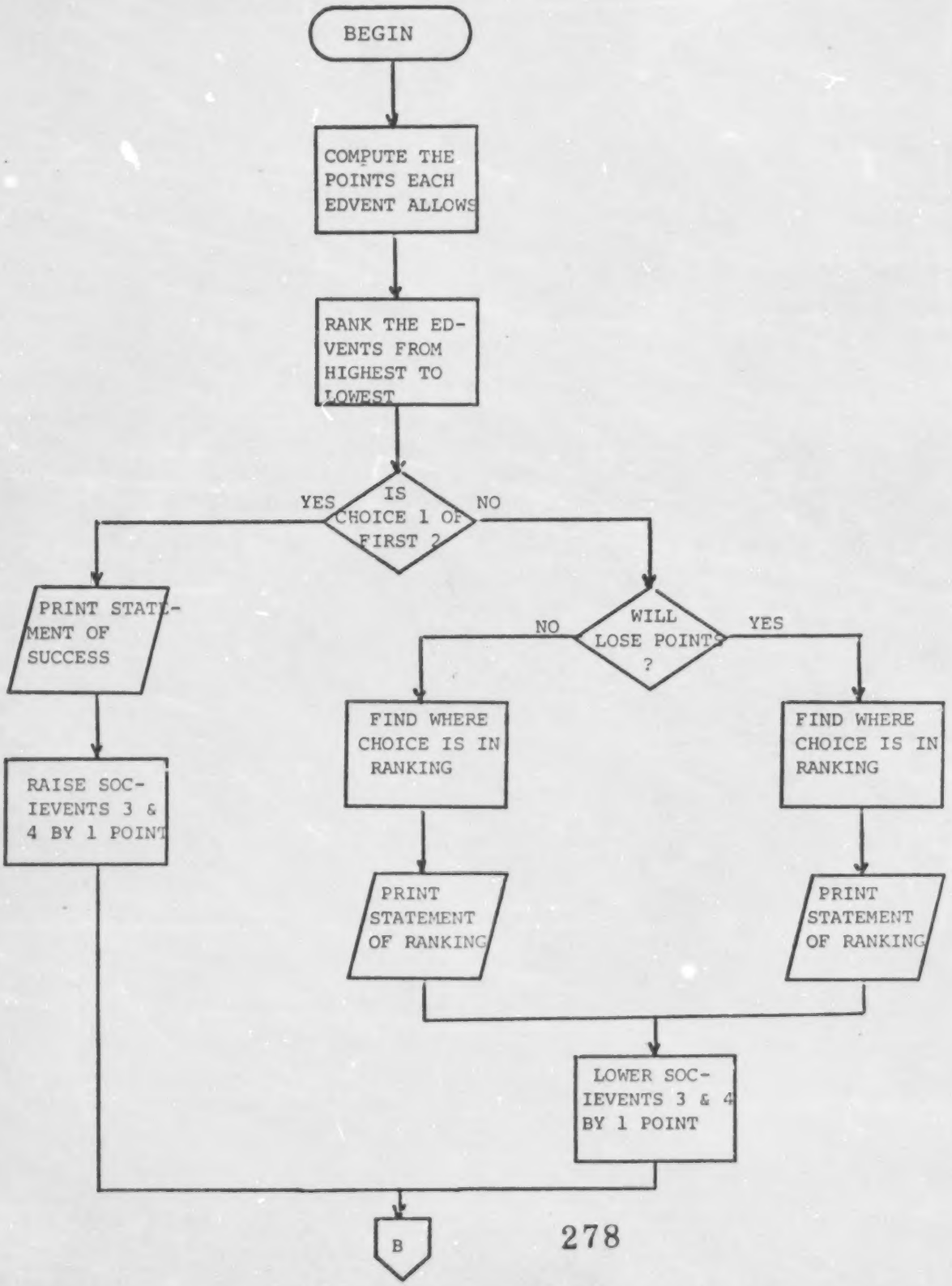
REVOLUTION: Subroutine to determine if a revolution occurs and if so, what its effects on the participants will be.

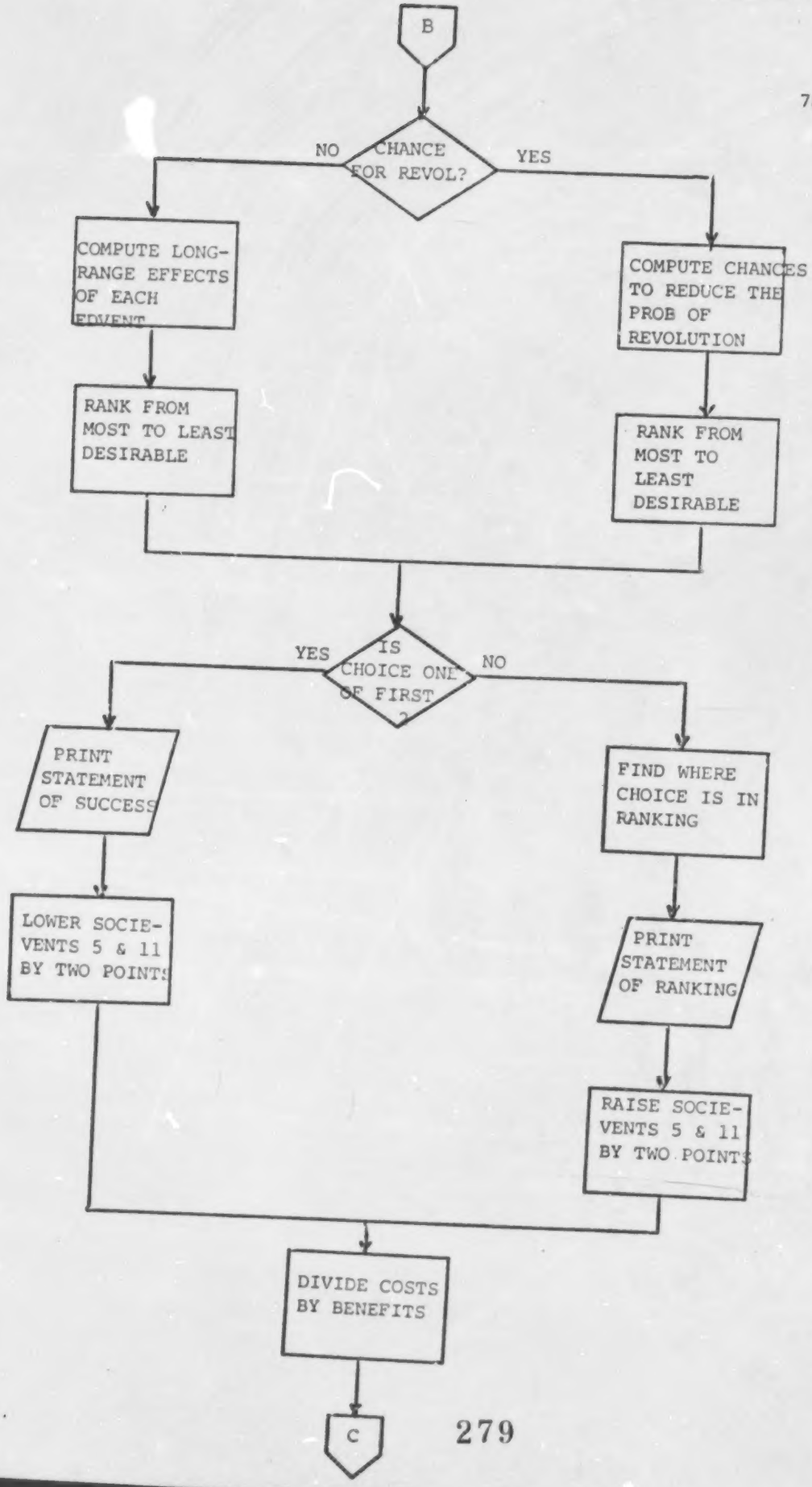


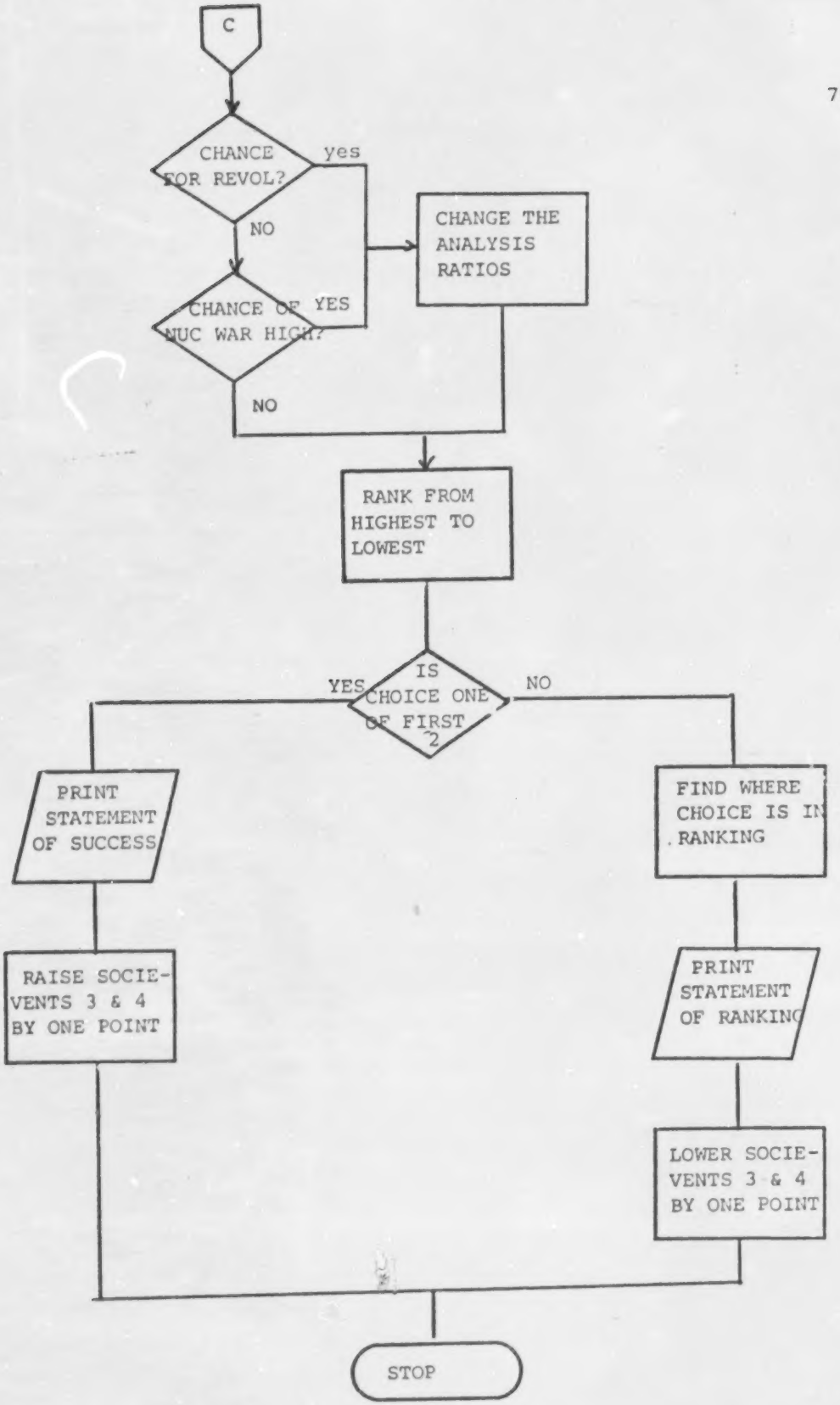
STATUS: Subroutine to inform game participants of new influence levels of the evaluators and probabilities of occurrence of the twelve socievents and of edvent failure.



CHOICE: Subroutine designed to evaluate all choices according to three analyses: public relations, lonr-range consequences, and cost-benefit.


BEGIN
COMPUTE THE POINTS EACH EDVENT ALLOWS
RANK THE ED-VENTS FROM HIGHEST TO LOWEST
IS CHOICE 1 OF FIRST 2
YES
NO
PRINT STATE-MENT OF SUCCESS
RAISE SOC-IEVENTS 3 & 4 BY 1 POINT
WILL LOSE POINTS ?
NO
YES
FIND WHERE CHOICE IS IN RANKING
FIND WHERE CHOICE IS IN RANKING
PRINT STATEMENT OF RANKING
PRINT STATEMENT OF RANKING
LOWER SOC-IEVENTS 3 & 4 BY 1 POINT
B


B
CHANCE FOR REVOL?
NO
YES
COMPUTE LONG-RANGE EFFECTS OF EACH EDVENT
COMPUTE CHANCES TO REDUCE THE PROB OF REVOLUTION
RANK FROM MOST TO LEAST DESIRABLE
RANK FROM MOST TO LEAST DESIRABLE
IS CHOICE ONE OF FIRST 2
YES
NO
PRINT STATEMENT OF SUCCESS
FIND WHERE CHOICE IS IN RANKING
LOWER SOCIE-VENTS 5 & 11 BY TWO POINTS
PRINT STATEMENT OF RANKING
RAISE SOCIE-VENTS 5 & 11 BY TWO POINTS
DIVIDE COSTS BY BENEFITS
C


C
CHANCE FOR REVOL?
yes
NO
CHANCE OF NUC WAR HIGH?
YES
CHANGE THE ANALYSIS RATIOS
NO
RANK FROM HIGHEST TO LOWEST
IS CHOICE ONE OF FIRST 2
YES
NO
PRINT STATEMENT OF SUCCESS
RAISE SOCIE-VENTS 3 & 4 BY ONE POINT
FIND WHERE CHOICE IS IN RANKING
PRINT STATEMENT OF RANKING
LOWER SOCIE-VENTS 3 & 4 BY ONE POINT
STOP

APPENDIX D

Complete Computer Programs for the game

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VALUES 89

INSURE 90

COST 90

STATUS 91

REVOLUTION 92

SF 93

SG 94

MAT 95

MUT 96

MR 97

SB 97

SC 97

```
      ∇SAFE[⎕]
    ∇ T SAFE R
[1]   SAVETEST←(⎕IO),⎕IO
[2]   →(R=1)/LUJ
[3]   EA←CUM[((T-1)×111)+⍳111]
[4]   MB←28↑EA
[5]   YR←EA[29]
[6]   JV←EA[29+⍳12]
[7]   JE←EA[41+⍳8]
[8]   ACC←EA[50]
[9]   RESULT←EA[51]
[10]  MATRIX[;1]← 60 1 ⍴EA[51+⍳60]
[11]  →BEG
[12] LUJ:VALUES 7
[13] BEG:YR←2+YA←YR+7◆DA←1+PERIOD←EA←0
[14]   '                                        INTRODUCTION'
[15]   'YOU ARE ABOUT TO PLAY THE GAME SAFE -- A SIMULATION OF THE FUTURE OF EDUCATION FRO
       M 1975 TO 2024 A.D.'
[16]   'YOU REPRESENT DISTRICT ';T;' AND ARE NOW RESPONSIBLE FOR EDUCATIONAL DECISIONS FRO
       M ';YR;' TO ';YR+9;'.'
[17]   2 1 ⍴'  '
[18]   SI← 6 3 ⍴'1ST2ND3RD4TH5TH6TH'
[19]   '                              BEGINNING: ';SI[R;];' TEN-YEAR PLANNING PERIOD'
[20]   MD←MC←LMB[2+⍳19]
[21]   SA←(1 2 2 2 3 3 3 3 3 3 4 4)[?12]
[22]   'GENERAL SOCIETAL AND INTERNATIONAL DEVELOPMENTS OVER THIS DECADE WILL STRENGTHEN I
       NFLUENCE GROUPS IN
              YOUR DISTRICT FAVORING ';SB[SA;]
[23] FED:→(YA≥(YR+8))/MU
[24]   XX←1+YA←YA+2
[25]   LM←(YA-1983)×YR>1975
[26]   D←LM+⍳N←((12+(YA-YR))×YR=1975)+20×YR>1975
[27]   'YOU ARE NOW LIVING IN THE YEAR ';YA;'. YOUR EDVENT OPTIONS ARE:'
[28]   '     ';NAMES[((,MATRIX[D;1])=0)/(E↑(LM↓⍳60));]
[29]   '  '
```

```
[30]  ACC←(A←(((ACC≤¯30000000)×ACC)÷¯10)+(((ACC≥30000000)×ACC)÷¯10))+ACC←ACC+12000000
[31]  'YOUR ACCOUNT HAS JUST BEEN CREDITED WITH SD ';12+A÷1000000;' MILLION FROM TAX REVE
      NUES.'
[32]  RESULT←RESULT+(B←⌊(A×A≤¯30000000)÷200000)+C←⌊((A-20000000)×((A←ACC-A)≥
      30000000))÷100000
[33]  PERIOD←PERIOD+B+C
[34]  →(A>¯30000000)/DEBT
[35]  'THE ABOVE TAX INCREASE BECAUSE OF DEBTS COST YOU ';|B;' SATISFACTION POINTS.'
[36]  MB[12 13 14]←MB[12 13 14]+ ¯10 10 10
[37] DEBT:→(A<30000000)/NOD
[38]  'THE ABOVE TAX DECREASE BECAUSE OF SAVINGS EARNED YOU ';C;' SATISFACTION POINTS.'
[39]  MB[12 13 14]←MB[12 13 14]-10
[40] NOD:→(ACC≥0)/MEA
[41]  'YOUR DISTRICT IS CURRENTLY IN DEBT ';|ACC÷1000000;' MILLION.'
[42]  →MEB
[43] MEA:'TOTAL DEPOSITS IN YOUR ACCOUNT NOW ARE SD ';ACC÷1000000;' MILLION.'
[44] MEB:' '
[45]  'WHICH EDVENT WOULD YOU LIKE TO IMPLEMENT THIS YEAR? IF NONE, TYPE 0.'
[46] ED:CH←1↑SE←⎕,0
[47]  →(CH=0)/SOD
[48]  XX←YA
[49]  X←(((MB[2+⍳7]>¯25)+(X>0))>0)×X←¯7↑MA←,MATRIX[CH;]
[50]  →((CH>LM)∧(CH≤(LM+E))∧((MA[1])=0))/CO
[51]  'YOU MAY CHOOSE EACH EDVENT ONLY ONCE AND IT MUST BE ONE OF THE OPTIONS STATED ABOV
      E.'
[52]  →MED
[53] CO:CHOICE
[54]  ' '
[55]  DA←DA+1-(DA≥10)×10
[56]  →((?10⍴200)[DA]>0.1×(+/MB[15 16 17 20]))/GOG
[57]  'UNFORTUNATELY, YOUR INNOVATION IS A FAILURE. HALF OF ITS SATISFACTION POINTS ARE L
      OST.'
[58]  X←¯0.5×X
[59]  MA[2+⍳19]←(⌊0.5×(MA[2+⍳12]<0)×MA[2+⍳12]),MA[14+⍳7]÷2
[60]  →SUC
[61] GOG:'YOUR INNOVATION IS SUCCESSFULLY IMPLEMENTED.'
[62] SUC:MATRIX[CH+LM;1]←1
[63]  HC←⌊0.5+1.5×X-(+/X)÷7
[64] SEW:MB←MB+ 0 0 ,HC,MA[2+⍳19]
```

```
[65]  →(SE[2]=0)/ED2
[66]  'INFLUENCE CHANGES: ';MC;'      TOTALS: ';⌊MB[2+⍳7]
[67]  'SOCIEVENT CHANGES: ';MA[2+⍳12];'      TOTALS: ';⌊MB[9+⍳12]
[68] ED2:ACC←ACC-MA[2]×100000
[69]  →(ACC≥0)/MEE
[70]  'YOUR DISTRICT IS NOW IN DEBT $D ';|ACC÷1000000;' MILLION.'
[71]  →XYX
[72] MEE:'YOU HAVE REMAINING IN YOUR ACCOUNT $D ';ACC÷1000000;' MILLION.'
[73] XYX:→(C<2)/MED
[74]  'WARNING: THERE IS NOW A ';⌈C×3.33;' PERCENT CHANCE OF REVOLUTION OVER THE NEXT TWO
       YEARS.'
[75] MED:'IS THERE ANOTHER EDVENT YOU WOULD LIKE TO IMPLEMENT DURING THIS TWO-YEAR PLANNI
      NG PERIOD?'
[76]  →ED
[77] SOD:→(XX≤YA)/SO
[78]  MB←MB+ 0 0 6 6 3 ¯3 ¯4 ¯3 ¯4 0 ¯2 ¯2 ¯4 ¯8 0 0 8 ¯2 0 8 1 2 2 1 ¯2 ¯3 ¯2 ¯3
[79]  CHOICE
[80] SO:'INDICATE BELOW HOW YOU WANT TO EDSURE TO CHANGE SOCIEVENT PROBABILITY LEVELS:
                  CON  PAR  TEA  STU  PRI  ACC  RED'
[81]  MB[13+⍳8]←MB[13+⍳8]-JER←((JER>1)+(JER≥0)×(JER≤1)×(JER←7⌊⌊□)),0
[82]  MB[2]←0
[83]  REVOLUTION
[84]  B←(C←MB[9+⍳12])-(0 0 0 0 ,(2×⌊0.5+(MB[13+⍳8]×JER)÷3))
[85]  MB[9+⍳12]←(C×C≥18)+(18×C≤17)+0×B←(B×B≥18)+18×B≤17
[86] HX:HB←(((MR[DA;])-B)<0)
[87]  HD←(MR[DA;]-C)<0
[88]  JV←JV+MB
[89]  →(∧/MB=0)/FI
[90]  'DURING ';YA;' AND ';YA+1;' THE FOLLOWING SOCIEVENTS OCCURRED:'
[91]  MAT[(MB/⍳12);]
[92]  MB[1+⍳20]←MB[1+⍳20]+(,+/[1](MUT[(MB/⍳12);]))+0,SC[SA;]
[93]  →FO
[94] FI:'NO SOCIEVENTS OCCURRED IN ';YA;' AND ';YA+1;'.'
[95] FO:→(∧/MB=MD)/FUT
[96]  ' '
[97]  'THE FOLLOWING SOCIEVENTS WOULD I VE OCCURRED IF YOU HAD NOT IMPLEMENTED EDSURANCE
       PROGRAMS.'
```

```
[98]  MAT[((HD-HB)/⍳12);]
[99] PUT:ACC←ACC+(MB[2]×10000)-(+/(JER/JE))
[100] FUM:'  '
[101]JOHN:'INDICATE BELOW HOW YOU WANT TO EDVERTISE TO CHANCE INFLUENCE AND SATISFACTION
      LEVELS:'
[102] '          NEO  ESS  SOC  EXP  REC  HUM  BIO'
[103] QB←(MB[21+⍳7]<3)×QB←0.1×7⍴⍞
[104] →((∧/QB≤1)∧(∧/QB≥0))/MAD
[105] 'YOU MAY NOT CHANGE ANY PERCEPTIONS BY LESS THAN 0 NOR MORE THAN 1 POINTS.'
[106] →FUM
[107]MAD:C←((MB[2+⍳7])≥0)×(MB[2+⍳7])
[108] →(∧/QB=0)/JUK
[109] MB[2+⍳7]←MB[2+⍳7]+H←⌊0.5+8×QB-(+/QB)÷7
[110] ACC←ACC-B←(+/QB×C×20000)+(+/500000×QB×MB[2+⍳7]<0)
[111] 'EDVERTISING COST YOU SD ';B÷1000000;' MILLION DURING THIS TWO-YEAR PERIOD.'
[112] 'FOR THIS YOU EARNED AN ADDITIONAL ';+/C×QB;' SATISFACTION POINTS'
[113] '       AND INCREASED INFLUENCE LEVELS BY ';+/H×H>0;' POINTS.'
[114] →((1+H←⍒(A×2000+((0.8×¯1+CC)÷(,MATRIX[D;2])),((+/C×QB)÷B÷100000)))=(E+1))/JUK
[115] 'IN COMPARISON TO EDVENTS FOR EARNING POINTS, YOUR EDVERTISING IS RANKED ';H⍳E+1;'.'

[116]JUK:MB[21+⍳7]←MB[21+⍳7]+QB
[117] RESULT←RESULT+HB←⌊0.5+(+/C×¯7↑MB)
[118] PERIOD←PERIOD+HB
[119] →(ACC≤0)/JAK
[120] '  '
[121] 'YOU HAVE EARNED SD ';0.045×ACC;' INTEREST FOR SAVINGS IN YOUR ACCOUNT.'
[122]JAK:'  '
[123] →(ACC≥0)/FIN
[124] 'YOU HAVE BEEN CHARGED SD ';|0.05×ACC;' INTEREST FOR OVERDRAWING YOUR ACCOUNT.'
[125] '  '
[126]FIN:ACC←ACC+((ACC<0)×ACC×0.05)+((ACC≥0)×ACC×0.045)
[127] →(HB≥0)/JAL
[128] 'THIS TWO-YEAR PLANNING PERIOD HAS NOW ENDED. UNFORTUNATE DECISIONS HAVE COST YOU '
      ;|HB;' SATISFACTION
      POINTS.'
[129] →JAM
[130]JAL:'THIS TWO-YEAR PLANNING PERIOD HAS NOW ENDED. YOU EARNED ';HB;' SATISFACTION POI
      NTS.'
```

```
[131]JAM:MB[21+⍳7]←7⍴0
[132] 'TOTAL SATISFACTION POINTS EARNED SINCE ';YR;' ARE: ';PERIOD;'.'
[133] →(((+/MD[1 2 3])-(+/MB[3 4 5]))<0)/XXX
[134] 'YOUR DISTPICT HAS BECOME SLIGHTLY MORE LIBERAL.'
[135] →XYY
[136]XXX:'YOUR DISTRICT HAS BECOME SLIGHTLY MORE CONSEPVATIVE.'
[137]XYY:→((A←+/MB[13+⍳8])≤(B←+/MD[11+⍳8]))/IKE
[138] 'NOTE: THE PROBABILITY OF UNDESIRABLE SOCIEVENTS OCCURRING HAS GONE UP BY ';A-B;' P
      OINTS.'
[139]IKE:→((A←+/MB[15 16 17 20])≤(B←+/MD[13 14 15 18]))/EEK
[140] 'NOTE: THE PROBABILITY OF EDVENT FAILURE HAS GONE UP BY ';A-B;' POINTS.'
[141]EEK:MD←MB[2+⍳19]
[142] 4 1 ⍴'  '
[143] →(ACC>¯200000000)/FED
[144] 'THE GOVERNMENT HAS COLLAPSED. PUBLIC SCHOOLS EXIST NO LONGER. EDUCATION HAS RETURN
      ED TO THE FAMILY,
      THE TRIBE AND THE PRIESTS.'
[145] →END
[146]MU:→(R=5)/END
[147] '
                                CONCLUSION TO THE ';SI[R;];' TEN-YEAR PLANNING PERIOD'
[148] 'THE TEN-YEAR PLANNING PERIOD HAS NOW ENDED. THE STATUS OF YOUR ACCOUNT IS SD ';ACC
      ÷1000000;' MILLION.'
[149] 'TOTAL SATISFACTION POINTS EARNED IN THE GAME SO FAR ARE: ';RESULT;'.'
[150] '  '
[151] STATUS
[152] INSURE
[153] →((⍴CUM)≥T×111)/TO
[154] CUM←(T×111)⍴CUM
[155]TO:CUM[((T-1)×111)+⍳111]←MB,YR,JV,JE,ACC,RESULT,(,MATRIX[;1])
[156] →AZA
[157]END: 4 1 ⍴'  '
[158] '
[159] '  '                                    GAME CONCLUSION'
[160] 'THE SIMULATION GAME SAFE IS NOW COMPLETED. BUT THE FUTURE IS JUST BEGINNING.'
[161] →((HA←⌊(HA×¯0.625×JV[12]≥1)+(HA←¯800×ACC÷10000000))<801)/GRAND
[162] 'UNFORTUNATELY, YOUR DISTRICT IS BANKRUPT. YOU LOSE ';HA;' SATISFACTION POINTS.'
[163] RESULT←RESULT-HA
[164]GRAND:'TOTAL SATISFACTION POINTS EARNED DURING THE ENTIRE GAME ARE: ';RESULT;'.'
[165] '  '
```

```
[166] 'EDVENTS PURCHASED DURING THE GAME ARE AS FOLLOWS:'
[167] NAMES[((,MATRIX[;1])/160);]
[168] '  '
[169] STATUS
[170] '  '
[171] 'THE FREQUENCY OF SOCIEVENT OCCURRENCE = ';JV
[172] 'TOTAL LOSES DUE TO THE OCCURRENCE OF NEGATIVE SOCIEVENTS = SD ';|+/(4↑JV)×(
      4↓(,(MUT[;1]))÷100);' MILLION.'
[173]AZA:A←RESULT÷(+/((,MATRIX[;1])×(,MATRIX[;2]))÷10)
[174] 'TOTAL SATISFACTION POINTS PER MILLION SD INVESTMENT NOW EQUAL:  ';A;'.'
     ∇
```

```
      ∇CHOICE[□]
    ∇ CHOICE
[1]   CH←CH-LM
[2]   →(XX≤YA./4
[3]   CH←E+1
[4]   DI←2
[5]   F←LM+⍳20
[6]   A←((,MATRIX[D;1])=0),1
[7]   W←,MATRIX[F;14+⍳7]
[8]   LT←140⍴(((MB[2+⍳7])≥0)×(MB[2+⍳7]))
[9]   GA←⍒A×2000+GC←(E+(,+/[2](20 7 ⍴W×LT))),(+/(7+LT)× 2 2 1 ¯2 ¯3 ¯2 ¯3)
[10]  →((GA[1]=CH)∨(GA[2]=CH))/FUN
[11]  →(GC[CH]<0)/BUN
[12]  'YOU MADE A GOOD, BUT NOT ONE OF THE BEST CHOICES FOR GAINING IMMEDIATE PUBLIC SATI
      SFACTION. ANALYSIS RANKS IT ';GA⍳CH;'.'
[13]  →BUD
[14] BUN:'UNFORTUNATELY, YOU WILL LIKELY LOSE POINTS BY THE IMPLEMENTATION OF THIS EDVENT
      . ANALYSIS RANKS IT ';GA⍳CH;'.'
[15] BUD:MB[12 13]←MB[12 13]-1
[16]  →FAT
[17] FUN:'YOU MADE ONE OF THE BEST POSSIBLE CHOICES FOR GAINING IMMEDIATE PUBLIC SATISFAC
      TION.'
[18]  MB[12 13]←MB[12 13]+1
[19] FAT:→((C←+/((MB[2+⍳7]<0)×(MB[2+⍳7]>¯70)))>1)/DYK
[20]  LT← 20 12 ⍴L((240⍴((,MUT[;1])×((MB[9+⍳12])÷1000)))×(,MATRIX[F;2+⍳12]))+
      0.5
[21]  LT←⍒A×24000+W←(E+(,+/[2] LT)),(+/(0.001×(,MUT[;1])×MB[9+⍳12])× 0 ¯2 ¯2 ¯4
      ¯8 0 0 8 ¯2 0 8 1)
[22]  →DIK
[23] DYK:W←(E+(,+/[2] W← 20 7 ⍴(140⍴MB[2+⍳7]<10)×W)-((,MATRIX[F;14])>0)×(,MATRIX[F;
      14])),(¯1+(+/(MB[2+⍳7]<10)× 2 2 1 ¯2 ¯3 ¯2 ¯3))
[24]  LT←⍒A×40+W
[25] DIK:→((LT[1]=CH)∨(LT[2]=CH))/FUD
[26]  'CAUTION: YOU DID NOT MAKE ONE OF THE BEST LONG-RANGE DECISIONS WHEN CONSIDERING SO
      CIEVENTS. ANALYSIS RANKS IT ';LT⍳CH;'.'
[27]  MB[14 20]←MB[14 20]+2
[28]  →JUD
```

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```
[29] FUD:'YOU MADE A GOOD LONG-RANGE DECISION WITH RESPECT TO SOCIEVENTS.'
[30]  MB[14 20]←MB[14 20]-2
[31] JUD:→(XX>YA)/0
[32]  →((C<2)∧(MB[21]<60))/MUD
[33]  DI←0.5
[34]  'IN VIEW OF THE FACT THAT CRISIS LEVEL POLICIES ARE NOW DEMANDED,'
[35] MUD:GB←⍋(+⌿(¯1↓A)×300+(¯1↓W)÷GD)+DI×+⌿(¯1↓A)×2000+(¯1↓GC)÷GD←,MATRIX[D;2]
[36]  →((GB[1]=CH)∨(GB[2]=CH))/DUD
[37]  'YOU HAVE MADE A REASONABLE COST-BENEFIT CHOICE, BUT OTHERS WERE BETTER. ANALYSIS R
      ANKS IT ';GB⍳CH;'.'
[38]  MB[12 13]←MB[12 13]-1
[39]  →0
[40] DUD:'A COST-BENEFIT ANALYSIS SUGGESTS THAT YOU MADE AN EXCELLENT OVERALL DECISION.'
[41]  MB[12 13]←MB[12 13]+1
    ∇
[42]  ∇
```

```
      ∇VALUES[□]
    ∇ VALUES B
[1]   →(B>0)/B+1
[2]   'INDICATE UNDER EACH EVALUATOR ITS NEW PERCENTAGE OF INFLUENCE (TOTAL MUST EQUAL 10
      0):
            NEO  ESS  SOC  EXP  REC  HUM  BIO'
[3]   →(1000≠+/A←10×7ρ□)/2
[4]   'INDICATE UNDER EACH SOCIEVENT ITS NEW 2-YEAR PROBABILITY OF OCCURRENCE (BETWEEN 18
       AND 1000):
            GNP  GRE  COM  NAT  CON  PAR  TEA  STU  PRI  ACC  RED NUC'
[5]   SD←0,0,A,(12ρ□),7ρ0
[6]   →0
[7]   SD← 0 0 80 320 250 110 120 100 20 666 90 220 250 65 95 115 125 120 55 65 20
      0 0 0 0 0 0 0
[8]   YR←1965+ACC←RESULT←DA←0
[9]   JV←12ρ0
[10]  JE← 138125 166250 258750 265625 210000 137500 203125 0
[11]  MATRIX[;1]← 60 1 ρ0
[12]  MB←SD
    ∇
[13]  ∇
```

Type VALUES 1 for resetting all values
Type VALUES 7 for resetting values according to above changes
Type VALUES 6 for resetting values as listed in the game manual

```
      ∇INSURE[⎕]
    ∇ INSURE
[1]   '  '
[2]   'NEW EDSURANCE COSTS NOW ARE:'
[3]   X←⍬W←0
[4]   LT← 8 3 ⍴'CONPARTEASTUPRIACCREDNUC'
[5]   LM← 42.5 35 45 42.5 35 50 62.5 1250
[6]   →(7<W←W+1)/TO
[7]   X←X,LR←⌊(((MB[13+W])÷2000)×LM[W]×100000)+0.5
[8]   LT[W;];'    ';LR
[9]   →6
[10] TO:'TOTAL COSTS NOW ARE SD ';(+/X)÷1000000;' MILLION.'
[11]  'THIS IS A CHANGE OF SD ';(+/X)-(+/7↑JE);'.'
[12]  JE←X,0
[13]  '  '
    ∇
[14]  ∇
```

```
      ∇COST[⎕]
    ∇ COST
[1]   A←0.01×⌊0.5+(0.001736×(⍳20)-SAVETEST[1])+0.2×(⍳21)-SAVETEST[2]
[2]   'THE COST OF RUNNING THIS ROUND OF THE GAME IS ';A;' DOLLARS.'
    ∇
[3]   ∇
```

```
      ∇STATUS[□]
    ⍝STATUS
[1]   W←0
[2]   →(R<5)/BUG
[3]   'CHANGES IN EVALUATOR INFLUENCE AND SOCIEVENT PROBABILITIES OVER THE ENTIRE GAME AR
      E AS FOLLOWS:'
[4]   '      2024  1975  CHANGE'
[5]   MC←SD
[6]   →FOG
[7]  BUG:'THE STATUS OF EVALUATOR INFLUENCE AND SOCIEVENTS IS AS FOLLOWS:'
[8]   '      NEW   OLD  CHANGE'
[9]  FOG:LT← 19 3 ⍴'NEOESSSOCEXPRECHUMBIOGNPGRECOMNATCONPARTEASTUPRIACCREDNUC'
[10]  LR←⌊MB[2+⍳19]
[11] DOG:→(19<W←W+1)/NOT
[12]  X← ⌈|((MC[W]< ¯100 ¯10 0 10 100 1000)⍳1)-4)-5
[13]  Y← ⌈|((LR[W]< ¯100 ¯10 0 10 100 1000)⍳1)-4)-5
[14]  LT[W;];'   ';LR[W];'      '[⍳Y];MC[W];'      '[⍳X];LR[W]-MC[W]
[15]  →DOG
[16] NOT:'  '
[17]  'ED F  ';+/LR[13 14 15 18];'   '[⍳3];+/MC[13 14 15 18];'   '[⍳3];(+/LR[13
      14 15 18])-(+/MC[13 14 15 18])
    ∇
[18]  ∇
```

```
      ∇REVOLUTION[□]
    ∇ REVOLUTION
[1]   →(C<2)/0
[2]   →(((?10⍴30)[DA])>C)/0
[3]   →(((?10⍴20)[DA])>(C*2))/Z
[4]   'SUPPRESSED SOCIO-POLITICAL GROUPS HAVE STAGED A SUCCESSFUL REVOLUTION. TWENTY MILL
      ION IN DAMAGES AND A POWER REVERSAL
      HAVE RESULTED.'
[5]   MB[2+⍳7]←⌊0.5+G+(C<0)×C+7⍴B←(1÷(+/(C<0)))×2×B←+/G←0.33×(C>0)×C←MB[2+⍳7]
[6]   MB←MB+ 0 0 0 0 0 0 0 0 0 0 ¯10 ¯10 5 30 20 ¯20 ¯20 10 50 0 ¯20 10 0 0 0 0 0
      0 0
[7]   →W
[8]  Z:'SUPPRESSED SOCIO-POLITICAL GROUPS HAVE JUST FAILED IN AN ATTEMPTED REVOLUTION. TW
      ENTY MILLION
      IN DAMAGES AND A CONCENTRATION OF POWER HAVE RESULTED.'
[9]   MB[2+⍳7]←((C<0)×C-40)+(((C-⌈/C)≥0)×(0.5×(+/G)))+0.5×G←(C>0)×C←MB[2+⍳7]
[10]  MB←MB+ 0 0 0 0 0 0 0 0 0 0 10 20 ¯20 20 ¯20 ¯20 ¯20 50 50 0 ¯20 5 0 0 0 0 0
      0 0
[11] W:ACC←ACC-20000000
[12]  'NEW INFLUENCE LEVELS NOW ARE: ';MB[2+⍳7];'     SOCIEVENT PROBABILITIES: ';MB[
      9+⍳12]
    ∇
[13]  ∇
```

```
      ∇SF[□]
    ⊢ ∇SF
[1]     'WHAT IS THE NUMBER OF THE SOCIEVENT TO BE CHANGED?'
[2]     →((A<1)∨(12<A←□))/1
[3]     'INDICATE THE DEGREE TO WHICH THE EVALUATORS WILL BECOME MORE OR LESS INFLUENTIAL I
        F IT OCCURS:
              NEO  ESS  SOC  EXP  REC  HUM  BIO'
[4]     →(7≠⍴B←□)/3
[5]     'INDICATE THE DEGREE TO WHICH EACH SOCIEVENT WILL BECOME MORE OR LESS PROBABLE:
                GNP  GRE  COM  NAT  CON  PAR  TEA  STU  PRI  ACC  RED  NUC'
[6]     →(12≠⍴C←□)/5
[7]     'STATE THE COST OF ITS OCCURRENCE TO THE DISTRICT IN MILLIONS OF STATOSDOLLARS:'
[8]     →(1000<DI←□)/7
[9]     MUT[A;⍳20]←(100×DI),B,C
      ∇
[10]  ∇
```

```
      ∇SG[⎕]
    ∇ SG
[1]   'WHAT IS THE NUMBER OF THE EDVENT TO BE CHANGED?'
[2]   →((A<1)∨((A←⎕)>60))/1
[3]   'STATE IN 21 SPACES OR LESS THIS NUMBER AND ITS NEW TITLE:'
[4]   NAMES[A;⍳26]←26ρ' '
[5]   →((ρB←⍞)>21)/3
[6]   NAMES[A;5+⍳ρB]←B
[7]   'INDICATE THE DEGREE TO WHICH EACH EVALUATOR FAVORS OR DISFAVORS IT (SCALE: ¯3 TO +
      3):
            NEO  ESS  SOC  EXP  REC  HUM  BIO'
[8]   →((∨/(|B)>3)∨(7≠ρB←⎕))/7
[9]   'INDICATE THE DEGREE TO WHICH IT CHANGES SOCIEVENT PROBABILITIES:
            GNP  GRE  COM  NAT  CON  PAR  TEA  STU  PRI  ACC  RED  NUC'
[10]  →(12≠ρC←⎕)/9
[11]  'STATE ITS COST IN MILLIONS OF STATOSDOLLARS:'
[12]  →(1000<DI←⎕)/11
[13]  MATRIX[A;⍳21]←0,(DI×10),C,B
    ∇
[14]  ∇
```

```
    NAT
1 NATIONAL GNP GROWTH EARNS YOUR DISTRICT SD 2,225,000.
2 GREATER SCHOOL EFFICIENCY EARNS YOUR DISTRICT SD 2,625,000.
3 GREATER COMMUNITY INVOLVEMENT EARNS YOUR DISTRICT SD 8,625,000.
4 GREATER NATIONAL INTEREST EARNS YOUR DISTRICT SD 6,750,000.
5 A CONSERVATIVE REACTION COSTS YOUR DISTRICT SD 4,250,000.
6 PARENTAL PROTESTS COST YOUR DISTRICT SD 3,500,000.
7 TEACHER STRIKES COST YOUR DISTRICT SD 4,500,000.
8 STUDENT RIOTS COST YOUR DISTRICT SD 4,250,000.
9 INFLUX OF NEW STUDENTS COSTS YOUR DISTRICT SD 3,500,000.
10 SCHOOL RELATED ACCIDENTS COST YOUR DISTRICT SD 5,000,000.
11 A REDIRECTION OF RESOURCES COSTS YOUR DISTRICT SD 5,250,000.
12 LIMITED NUCLEAR WAR COSTS YOUR DISTRICT SD 125,000,000.
```

MUT													
225	-5	-5	2	2	3	4	1	6	-3	3	6	6	-3
	6	6	0	0	1								
260	-5	3	4	-1	1	-2	3	3	3	-3	3	-6	0
	3	0	0	-3	3								
850	3	5	-3	-3	-7	3	-7	0	-3	3	-3	-3	-6
	-3	6	-3	-6	0								
675	-5	-2	3	-2	10	-7	5	3	3	-3	3	3	3
	0	3	0	-9	0								
-425	10	-20	-7	-7	-2	-10	-2	3	3	-3	-6	3	0
	6	-6	-3	9	3								
-350	-10	5	5	-1	-3	-5	-10	0	-3	3	0	3	6
	-3	-6	-3	-3	0								
-450	-5	5	20	-2	-2	-10	-5	-6	-9	0	3	3	0
	0	-3	0	6	0								
-425	-2	-7	5	3	3	8	-7	-3	-6	-6	3	6	0
	9	-3	6	6	-3								
-350	13	-10	5	8	-10	5	-10	0	3	3	3	0	0
	0	0	0	0	3								
-500	15	5	-2	-2	-2	-2	-2	-3	-6	-6	-6	6	9
	3	-6	-3	6	0								
-625	15	-15	-2	-5	-10	-2	-10	3	3	-3	-6	-3	0
	6	-9	-3	3	3								
12500	-120	-100	-60	-40	80	-80	100	-180	-120	-120	-120	30	-30
	-30	0	0	60	60								

MR

968	225	991	516	268	982	487	925	629	309	804	135
574	175	803	399	982	871	12	492	677	578	17	453
985	781	1000	390	972	228	770	221	957	498	942	155
457	842	977	31	112	410	701	547	69	886	737	949
985	622	501	623	703	766	892	578	633	536	285	361
178	366	848	543	264	498	448	471	591	792	693	96
213	715	17	193	330	17	256	484	892	675	737	875
893	585	553	3	811	239	436	585	241	630	793	506
335	402	420	900	333	802	876	746	932	210	534	279
199	803	789	179	354	668	62	174	500	771	75	945

SB

EXTREME CONSERVATISM.
MODERATE CONSERVATISM.
MODERATE LIBERALISM.
EXTREME LIBERALISM.

SC

6	4	2	-1	-3	-3	-5	2	6	2	-6	-6	-1	-4	6	-4	-2	4	4
-2	4	-2	1	-2	-2	3	-1	3	0	-3	-3	-3	-2	-3	-2	-1	-2	2
-2	-4	-2	1	2	2	3	-1	-3	0	3	3	0	4	-3	4	1	-2	-2
-6	-4	-2	1	3	3	5	-2	-6	4	6	6	2	6	6	-4	2	6	2